

Sequence Listing

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Baker, Kevin P.  
Botstein, David  
Desnoyers, Luc  
Eaton, Dan L.  
Ferrara, Napoleone  
Fong, Sherman  
Gerber, Hanspeter  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, J. Christopher  
Gurney, Austin L.  
Kljavin, Ivar J.  
Napier, Mary A.  
Pan, James  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Stewart, Timothy A.  
Tumas, Daniel  
Watanabe, Colin K.  
Williams, P. Mickey  
Wood, William I.  
Zhang, Zemin

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<212> PRT  
<213> Homo sapiens

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 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe  
                  50                        55                        60  
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn  
                  65                        70                        75  
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala  
                  80                        85                        90  
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn  
                  95                        100                       105  
 Trp Ile Cys Ile Val Ile Thr Gly Leu Ala Met Asp Met Gln Leu  
                  110                       115                       120  
 Leu Met Ile Pro Leu Ile Met Ser Val Leu Tyr Val Trp Ala Gln  
                  125                       130                       135  
 Leu Asn Arg Asp Met Ile Val Ser Phe Trp Phe Gly Thr Arg Phe  
                  140                       145                       150  
 Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu Gly Phe Asn Tyr Ile  
                  155                       160                       165  
 Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly Asn Leu Val Gly  
                  170                       175                       180  
 His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met Asp Leu Gly  
                  185                       190                       195  
 Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg Trp Leu  
                  200                       205                       210  
 Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Pro Ala  
                  215                       220                       225  
 Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Arg His  
                  230                       235                       240  
 Asn Trp Gly Gln Gly Phe Arg Leu Gly Asp Gln  
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<210> 7  
 <211> 1373  
 <212> DNA  
 <213> Homo sapiens

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<210> 8  
<211> 367  
<212> PRT  
<213> Homo sapiens

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Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys		
50	55	60
Val Pro Leu Val Phe Asp Asp Glu Glu Ser Lys Leu Thr Tyr		
65	70	75
Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu		
80	85	90
Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln		
95	100	105
Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala		
110	115	120
Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys		
125	130	135
Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile		
140	145	150
Arg Ile Ile Gln Glu Arg Asn Gly Val Leu Pro Asp Cys Leu Thr		
155	160	165
Asp Gly Ser Asp Val Val Ser Asp Leu Glu His Glu Glu Met Lys		
170	175	180
Ile Leu Arg Glu Val Leu Arg Lys Ser Lys Glu Glu Tyr Asp Gln		
185	190	195
Glu Glu Glu Arg Lys Arg Lys Lys Gln Leu Ser Glu Ala Lys Thr		
200	205	210
Glu Glu Pro Thr Val His Ser Ser Glu Ala Ala Ile Met Asn Asn		
215	220	225
Ser Gln Gly Asp Gly Glu His Phe Ala His Pro Pro Ser Glu Val		
230	235	240
Lys Met His Phe Ala Asn Gln Ser Ile Glu Pro Leu Gly Arg Lys		
245	250	255
Val Glu Arg Ser Glu Thr Ser Ser Leu Pro Gln Lys Gly Leu Lys		
260	265	270
Ile Pro Gly Leu Glu His Ala Ser Ile Glu Gly Pro Ile Ala Asn		
275	280	285
Leu Ser Val Leu Gly Thr Glu Glu Leu Arg Gln Arg Glu His Tyr		
290	295	300
Leu Lys Gln Lys Arg Asp Lys Leu Met Ser Met Arg Lys Asp Met		
305	310	315

Arg Thr Lys Gln Ile Gln Asn Met Glu Gln Lys Gly Lys Pro Thr  
320 325 330  
Gly Glu Val Glu Glu Met Thr Glu Lys Pro Glu Met Thr Ala Glu  
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Glu Lys Gln Thr Leu Leu Lys Arg Arg Leu Leu Ala Glu Lys Leu  
350 355 360  
Lys Glu Glu Val Ile Asn Lys  
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<211> 418  
<212> DNA  
<213> Homo sapiens

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gaggaatattt accaggaa 418

<210> 10  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 10  
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<210> 11  
<211> 23  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 11  
ctaagaacctt ccctcaggat ttt 23

<210> 12  
<211> 40  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 12  
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<210> 13  
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<212> DNA  
<213> Homo sapiens

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<211> 424  
<212> PRT  
<213> Homo sapiens

<400> 14  
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Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn  
35 40 45  
Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu  
50 55 60  
Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys  
65 70 75  
Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu  
80 85 90  
Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe  
95 100 105  
Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro  
110 115 120  
Ala Met Ala Val Ile Phe Ser Asn Phe Ser Ile Ile Thr Thr Ala  
125 130 135  
Leu Leu Phe Arg Ile Val Leu Lys Arg Arg Leu Asn Trp Ile Gln  
140 145 150  
Trp Ala Ser Leu Leu Thr Leu Phe Leu Ser Ile Val Ala Leu Thr  
155 160 165  
Ala Gly Thr Lys Thr Leu Gln His Asn Leu Ala Gly Arg Gly Phe  
170 175 180

His His Asp Ala Phe Phe Ser Pro Ser Asn Ser Cys Leu Leu Phe  
 185 190 195  
 Arg Ser Glu Cys Pro Arg Lys Asp Asn Cys Thr Ala Lys Glu Trp  
 200 205 210  
 Thr Phe Pro Glu Ala Lys Trp Asn Thr Thr Ala Arg Val Phe Ser  
 215 220 225  
 His Ile Arg Leu Gly Met Gly His Val Leu Ile Ile Val Gln Cys  
 230 235 240  
 Phe Ile Ser Ser Met Ala Asn Ile Tyr Asn Glu Lys Ile Leu Lys  
 245 250 255  
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 260 265 270  
 Leu Tyr Phe Phe Gly Ile Leu Phe Asn Gly Leu Thr Leu Gly Leu  
 275 280 285  
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 Gln Gly Leu Ser Val Ala Phe Ile Leu Lys Phe Leu Asp Asn Met  
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 Phe His Val Leu Met Ala Gln Val Thr Thr Val Ile Ile Thr Thr  
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 Val Ser Val Leu Val Phe Asp Phe Arg Pro Ser Leu Glu Phe Phe  
 350 355 360  
 Leu Glu Ala Pro Ser Val Leu Leu Ser Ile Phe Ile Tyr Asn Ala  
 365 370 375  
 Ser Lys Pro Gln Val Pro Glu Tyr Ala Pro Arg Gln Glu Arg Ile  
 380 385 390  
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 410 415 420  
 Glu Asp Thr Phe

<210> 15  
 <211> 755  
 <212> DNA  
 <213> Homo sapiens

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<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
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<210> 17  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
tcagagaatt cttccagga 20

<210> 18  
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<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

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<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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DRAFT PROTEIN

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aggaagggaa ctgaagactc aaggaggtgg cccaggacac ttgctgtgct 1900  
caactgtgggg ccggctgctc tgtggcctcc tgcctcccct ctgcctgcct 1950  
gtggggccaa gccctgggc tgccactgtg aatatgccaa ggactgatcg 2000  
ggcctagccc ggaacactaa tgtagaaacc tttttttac agagccta 2050  
taataactta atgactgtgt acatagcaat gtgtgttat gtatatgtct 2100  
gtgagctatt aatgttatta atttcataa aagctggaaa gc 2142

<210> 20  
<211> 458  
<212> PRT  
<213> Homo sapiens

<400> 20  
Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu  
1 5 10 15  
Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser  
20 25 30  
Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro  
35 40 45  
Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser  
50 55 60  
Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr  
65 70 75

Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met  
                   80                      85                         90  
  
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr  
                   95                      100                     105  
  
 Glu Arg Asp Ser Ala Thr Ala Tyr Arg Met Thr Val Glu Val Leu  
                   110                      115                     120  
  
 Gly Thr Val Leu Gly Thr Ala Ile Gln Gly Gln Ile Val Gly Gln  
                   125                      130                     135  
  
 Ala Asp Thr Pro Cys Phe Gln Asp Phe Asn Ser Ser Thr Val Ala  
                   140                      145                     150  
  
 Ser Gln Ser Ala Asn His Thr His Gly Thr Thr Ser His Arg Glu  
                   155                      160                     165  
  
 Thr Gln Lys Ala Tyr Leu Leu Ala Ala Gly Val Ile Val Cys Ile  
                   170                      175                     180  
  
 Tyr Ile Ile Cys Ala Val Ile Leu Ile Leu Gly Val Arg Glu Gln  
                   185                      190                     195  
  
 Arg Glu Pro Tyr Glu Ala Gln Ser Glu Pro Ile Ala Tyr Phe  
                   200                      205                     210  
  
 Arg Gly Leu Arg Leu Val Met Ser His Gly Pro Tyr Ile Lys Leu  
                   215                      220                     225  
  
 Ile Thr Gly Phe Leu Phe Thr Ser Leu Ala Phe Met Leu Val Glu  
                   230                      235                     240  
  
 Gly Asn Phe Val Leu Phe Cys Thr Tyr Thr Leu Gly Phe Arg Asn  
                   245                      250                     255  
  
 Glu Phe Gln Asn Leu Leu Ala Ile Met Leu Ser Ala Thr Leu  
                   260                      265                     270  
  
 Thr Ile Pro Ile Trp Gln Trp Phe Leu Thr Arg Phe Gly Lys Lys  
                   275                      280                     285  
  
 Thr Ala Val Tyr Val Gly Ile Ser Ser Ala Val Pro Phe Leu Ile  
                   290                      295                     300  
  
 Leu Val Ala Leu Met Glu Ser Asn Leu Ile Ile Thr Tyr Ala Val  
                   305                      310                     315  
  
 Ala Val Ala Ala Gly Ile Ser Val Ala Ala Ala Phe Leu Leu Pro  
                   320                      325                     330  
  
 Trp Ser Met Leu Pro Asp Val Ile Asp Asp Phe His Leu Lys Gln  
                   335                      340                     345  
  
 Pro His Phe His Gly Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val  
                   350                      355                     360  
  
 Phe Phe Thr Lys Phe Ala Ser Gly Val Ser Leu Gly Ile Ser Thr

365	370	375
Leu Ser Leu Asp Phe Ala Gly Tyr Gln	Thr Arg Gly Cys Ser Gln	
380	385	390
Pro Glu Arg Val Lys Phe Thr Leu Asn Met Leu Val Thr Met Ala		
395	400	405
Pro Ile Val Leu Ile Leu Leu Gly Leu	Leu Phe Lys Met Tyr	
410	415	420
Pro Ile Asp Glu Glu Arg Arg Arg Gln	Asn Lys Lys Ala Leu Gln	
425	430	435
Ala Leu Arg Asp Glu Ala Ser Ser Ser	Gly Cys Ser Glu Thr Asp	
440	445	450
Ser Thr Glu Leu Ala Ser Ile Leu		
455		

<210> 21  
<211> 571  
<212> DNA  
<213> Homo sapiens

<400> 21  
ggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50  
tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100  
accctatgaa gcccagcagt ctgagccaat cgccacttgc cggggcctac 150  
ggctggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200  
ttcacctcct tggcttcat gctggtgag gggactttg tcttgtttg 250  
cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctccctggcca 300  
tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350  
cggtttggca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400  
atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450  
cggttagctgt ggcagctggc atcagtgtgg cagctgcctt cttactaccc 500  
tggtccatgc tgcctgatgt cattgacgac ttccatctga agcagcccc 550  
cttccatgga accgagccca t 571

<210> 22  
<211> 1173  
<212> DNA  
<213> Homo sapiens

<400> 22  
ggggcttcgg cgccagcggc cagcgctagt cggtctggta aggattaca 50

aaaggtgcag gtagcag gtctgaagac taacatgg tgaagttgta 100  
aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagttc 150  
cttccttcag ccctttaat ttggacatct gctgcttca tattttcata 200  
cattactgca gtaacactcc accatataga cccggcttta ccttatatca 250  
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300  
aatattgcgg cagtttatg cattgctacc atttatgttc gttataagca 350  
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400  
ctggccttgt acttggata ctgagttgtt taggacttgc tattgtggca 450  
aacttccaga aaacaaccct ttttgcgtca catgtaagtg gagctgtgct 500  
taccttttgtt atgggctcat tatatatgtt tgttcagacc atccttcct 550  
accaaatttgc gccccaaaatc catggcaaac aagtcttctg gatcagactg 600  
ttgttggta tctgggtgtgg agtaagtgc cttagcatgc tgacttgctc 650  
atcagtttg cacagtggca attttggac tgatattgaa cagaaactcc 700  
attggAACCC cgaggacaaa ggttatgtgc ttcacatgt cactactgca 750  
gcagaatggt ctatgtcatt ttcccttctt ggtttttcc tgacttacat 800  
tcgtgatttt cagaaaattt cttaacgggt ggaagccaat ttacatggat 850  
taaccctcta tgacactgca cttggcccta ttaacaatga acgaacacgg 900  
ctactttcca gagatatttgc atgaaaggat aaaatatttc tgtaatgatt 950  
atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000  
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050  
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100  
atcatcaaga agactattaa aaacacccat gcctatactt ttttatctca 1150  
gaaaataaag tcaaaaagact atg 1173

<210> 23  
<211> 266  
<212> PRT  
<213> Homo sapiens

<400> 23  
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1 5 10 15  
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala  
20 25 30

Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp  
                   35                  40                  45  
 Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu  
                   50                  55                  60  
 Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr  
                   65                  70                  75  
 Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys  
                   80                  85                  90  
 Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly  
                   95                  100                105  
 Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala  
                   110                115                120  
 His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr  
                   125                130                135  
 Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile  
                   140                145                150  
 His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp  
                   155                160                165  
 Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu  
                   170                175                180  
 His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp  
                   185                190                195  
 Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala  
                   200                205                210  
 Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr  
                   215                220                225  
 Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn  
                   230                235                240  
 Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn  
                   245                250                255  
 Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile  
                   260                265

<210> 24  
 <211> 485  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 14, 484  
 <223> unknown base

DNA BANK

<400> 24  
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ctgatgccga gttccgtctc tcgggtcttt tcctggtccc aggcaaagcg 100  
gagcggagat cctcaaacgg octagtgtt cgcgttccg gagaaaatca 150  
gcggtcta at taattcctct ggtttggta agcagttacc aagaatottc 200  
aaccctttcc cacaaaagct aattgagttt acgttctgt tgagtacacg 250  
ttcctgttga tttacaaaag gtgcaggat gagcaggatc gaagactaac 300  
attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtggttca 350  
gcaaggcctc agtttccttc cttagccct tgtaatttg acatctgctg 400  
cttcataatt ttcatacatt actgcagtaa cactccacca tatagacccg 450  
gctttacatt atatcagtga cactggtaca gtanc 485

<210> 25  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
acctgttaga aatgtggtgg tttcagcaag gcctcagttt 40

<210> 26  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
ggagatagct gctatgggtt cttaggcac aacttaacat ggaaag 46

<210> 27  
<211> 1399  
<212> DNA  
<213> Homo sapiens

<400> 27  
ccccacgcgc cggccgcgc tgcgtccgg agtgcagtg agcttctcg 50  
ctgccccgcg ggccgggggtg cggagccgac atgcgcgcgc ttctcgcc 100  
ccttctggc ttcgcggct gcaccttcgc cttgtacttg ctgtcgcacgc 150  
gactgccccg cggccggaga ctgggctcca ccgaggaggc tggaggcagg 200  
tcgctgtgg tccctccga cctggcagag ctgcgggagc tctctgaggt 250

DRAFT

ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctttct 300  
gcggcgccata cctctacaaa cagggcttg ccatccccgg ctccagcttc 350  
ctgaatgttt tagctggtgc cttgtttggg ccatggctgg ggcttctgct 400  
gtgctgtgtg ttgacctcggtggccac atgctgctac ctgctctcca 450  
gtatTTTgg caaacagttg gtgggtgtct actttcctga taaagtggcc 500  
ctgctgcaga gaaagggtgga ggagaacaga aacagcttgtt ttttttctt 550  
attgttttg agactttcc ccatgacacc aaactggttc ttgaacctct 600  
cgcccccaat tctgaacatt cccatcggtgc agttttctt ctcagttctt 650  
atcggtttga tcccatataa tttcatctgt gtgcagacag ggtccatcct 700  
gtcaacccta acctctctgg atgctctttt ctcctggac actgtctta 750  
agctgttggc cattgccatg gtggcattaa ttcctggAAC cctcattaaa 800  
aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaata 850  
tatacacagt agaaaagaca catgatctgg atttctgtt tgccacatcc 900  
ctggactcag ttgcttattt gtgtaatgga tgtggtcctc taaagcccct 950  
cattgtttt gattgccttc tataaggat gtggacactg tgcatcaatg 1000  
tgcagtgtct tttcagaaag gacactctgc tcttgaaggt gtattacatc 1050  
aggTTTcaa accagccctg gtgttagcaga cactgcaaca gatgcctcct 1100  
agaaaatgct gtttgtggcc gggcgcggtg gtcacgcct gtaatcccag 1150  
cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200  
agcctggcca agatggtaaa atcctgtctc taataaaaat acaaaaatta 1250  
gccaggcggtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300  
gcaggagaat tgcttgaacc aaggtggcag aggttgcagt aagccaagat 1350  
cacaccactg cactccagcc tgggtgatag agttagacac tgccttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr
1									10					15

Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg
									20					30

Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro  
                   35                  40                  45  
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu  
                   50                  55                  60  
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly  
                   65                  70                  75  
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe  
                   80                  85                  90  
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu  
                   95                  100                105  
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr  
                   110                115                120  
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe  
                   125                130                135  
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg  
                   140                145                150  
 Asn Ser Leu Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met  
                   155                160                165  
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile  
                   170                175                180  
 Pro Ile Val Gln Phe Phe Ser Val Leu Ile Gly Leu Ile Pro  
                   185                190                195  
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu  
                   200                205                210  
 Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu  
                   215                220                225  
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys  
                   230                235                240  
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala  
                   245                250                255  
 Asn His Ile His Ser Arg Lys Asp Thr  
                   260

<210> 29  
 <211> 1292  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
 ccgaggcggg aggagccga gggggcgca gccccgcatg aatcatgtt 50  
 gtcaatcatt ttccagttct cagccgctca gttgtatca agggacacgt 100

ggtttccgaa ctgccagctc agaataggaa aataacttgg gatttatat 150  
tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200  
tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250  
agagaaggca attaaaaat ttatcagaca gctgctggaa aagaatgaac 300  
ctcagagacc ccccccgca gatcctctcc ttatagttgt gtataagggtt 350  
ctcgcaacct tgggattaat cttgctcaact gcctactttg tgattcaacc 400  
tttcagccca ttagcacctg agccagtgt ttctggagct cacacctggc 450  
gctcactcat ccatcacatt aggctgatgt ccttgcctat tgccaagaag 500  
tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550  
accctttcca gactttgacc cctggtggac aaacgactgt gagcagaatg 600  
agtcagagcc cattcctgcc aactgcactg gctgtgccta gaaacacctg 650  
aaggtgatgc tccttggaaa cgcccaagg aaatttggaa ggctccatcc 700  
actggtgatc aagacggaa agccctgtt ggaggaagag attcagcatt 750  
ttttgtgcca gtaccctgag gcgacagaag gcctctctga agggttttc 800  
gccaagtggt ggcgctgctt tcctgagcgg tgggtccat ttcccttatcc 850  
atggaggaga cctctgaaca gatcacaaat gttacgtgag cttttcctg 900  
tttcactca cctgccattt ccaaaagatg ccttttaaa caagtgcctcc 950  
tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000  
cctatattatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050  
tccagtgcgg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100  
gatatcggt atgtcgacac cacccactgg aaggctacg ttatagccag 1150  
aggggtccag ctttggta tctgcgttgg aaccgcttc tcagaactgt 1200  
aggaaataga actgtgcaca ggaacagtt ccagagccga aaaccaggtt 1250  
gaaaggggaa aaataaaaac aaaaacgatg aaactgc当地 1292

<210> 30  
<211> 347  
<212> PRT  
<213> Homo sapiens

<400> 30  
Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser  
1 5 10 15  
Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met

20	25	30
Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys		
35	40	45
Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val		
50	55	60
Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala		
65	70	75
Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val		
80	85	90
Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg		
95	100	105
Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys		
110	115	120
Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp		
125	130	135
Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu		
140	145	150
Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys		
155	160	165
Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His		
170	175	180
Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile		
185	190	195
Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser		
200	205	210
Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp		
215	220	225
Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln		
230	235	240
Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro		
245	250	255
Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro		
260	265	270
Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile		
275	280	285
Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys		
290	295	300
Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp		
305	310	315

Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala  
320 325 330

Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser  
335 340 345

Glu Leu

<210> 31  
<211> 478  
<212> DNA  
<213> Homo sapiens

<400> 31  
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gcccggagggg cgcgagcccc gcatgaatca ttgttagtcaa tcattttcca 100  
gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150  
agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200  
ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250  
ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300  
aaaatttatac agacagctgc tggaaaagaa tgaacctcag agacccccc 350  
cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttggga 400  
ttaatcttgc tcactgccta ctttgtgatt caaccttca gcccattagc 450  
acctgagcca gtgcttggc gagctcac 478

<210> 32  
<211> 3531  
<212> DNA  
<213> Homo sapiens

<400> 32  
cccacgcgtc cgcccacgcg tccggctgaa caccctttct ttggagtcag 50  
ccactgatga ggcagggtcc ccacttgcag ctgcagcagc tgcagcagct 100  
gcagagcgt gtcctggct ggtgccactg gtgcgcacgc tgctagaccg 150  
tgcctatgag ccgctggggc tgcagtgggg actgccctcc ctgccaccca 200  
ccaatggcag ccccaccttc tttgaagact tccaggctt ttgtccaca 250  
cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300  
gttcgaaatg gacacgtatg ctaagagcca cgacctttag tcaggtttct 350  
ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcccagtg 400  
gagcgcgcggc agagtcgtcg ggccttccag gagctggtgc tggAACCTGC 450

gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500  
agcaggcaac gcagcactcc atggccctgc tgcaactgggg ggcgctgtgg 550  
cgccagctcg ccagccccatg tggggcctgg ggcgctgaggg acactcccat 600  
cccccgctgg aaactgtcca ggcggagac atattcacgc atgcgtctga 650  
agctggtgcc caaccatcac ttgcaccctc acctggaagc cagcgctctc 700  
cgagacaatc tgggtgaggt tcccctgaca cccaccgagg aggccctact 750  
gcctctggca gtgaccaaag aggccaaagt gagcacccca cccgagttgc 800  
tgcaggagga ccagctcgcc gaggacgagc tggctgagct ggagaccccg 850  
atggaggcag cagaactgga tgagcagcgt gagaagctgg tgctgtcgcc 900  
cgagtgccag ctggtgacgg tagtggccgt ggtcccaggg ctgctggagg 950  
tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgcgtggaa 1000  
accgaggagg gcatcggtta tgattccgg cgcccaactgg cccagctgcg 1050  
tgaggtccac ctgcggcggt tcaacctgcg ccgttcagca cttgagctct 1100  
tcttatcga tcaggccaac tacttcctca acttcccatg caaggtgggc 1150  
acgaccccaag tctcatctcc tagccagact ccgagacccc agcctggccc 1200  
catcccaccc catacccaagg tacggaacca ggtgtactcg tggctcctgc 1250  
gcctacggcc cccctctcaa ggctacctaa gcagccgctc ccccccaggag 1300  
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gccccatcggt gtggtaacc ccaagcatgc ccagctcggt agggagaagt 1550  
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caggggtga gcggggccca ccctgccca ctcaggatt ggccggcgat 3450  
gttaccctt cagggattgg cgggcgaaag tcccgccct cgccggctga 3500  
ggggccgccc tgagggccag cactggcgta t 3531

<210> 33  
<211> 1003  
<212> PRT  
<213> Homo sapiens

<400> 33  
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Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser  
20 25 30  
Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe  
35 40 45  
Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu  
50 55 60  
Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His  
65 70 75  
Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala  
80 85 90  
Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg  
95 100 105  
Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys.  
110 115 120  
Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala  
125 130 135  
Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu  
140 145 150  
Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr  
155 160 165  
Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu  
170 175 180  
Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln  
185 190 195  
Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val  
200 205 210  
Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val  
215 220 225

Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly  
 230 235 240  
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val  
 245 250 255  
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe  
 260 265 270  
 Phe Ile Asp Gln Ala Asn Tyr Phe Leu Asn Phe Pro Cys Lys Val  
 275 280 285  
 Gly Thr Thr Pro Val Ser Ser Pro Ser Gln Thr Pro Arg Pro Gln  
 290 295 300  
 Pro Gly Pro Ile Pro Pro His Thr Gln Val Arg Asn Gln Val Tyr  
 305 310 315  
 Ser Trp Leu Leu Arg Leu Arg Pro Pro Ser Gln Gly Tyr Leu Ser  
 320 325 330  
 Ser Arg Ser Pro Gln Glu Met Leu Arg Ala Ser Gly Leu Thr Gln  
 335 340 345  
 Lys Trp Val Gln Arg Glu Ile Ser Asn Phe Glu Tyr Leu Met Gln  
 350 355 360  
 Leu Asn Thr Ile Ala Gly Arg Thr Tyr Asn Asp Leu Ser Gln Tyr  
 365 370 375  
 Pro Val Phe Pro Trp Val Leu Gln Asp Tyr Val Ser Pro Thr Leu  
 380 385 390  
 Asp Leu Ser Asn Pro Ala Val Phe Arg Asp Leu Ser Lys Pro Ile  
 395 400 405  
 Gly Val Val Asn Pro Lys His Ala Gln Leu Val Arg Glu Lys Tyr  
 410 415 420  
 Glu Ser Phe Glu Asp Pro Ala Gly Thr Ile Asp Lys Phe His Tyr  
 425 430 435  
 Gly Thr His Tyr Ser Asn Ala Ala Gly Val Met His Tyr Leu Ile  
 440 445 450  
 Arg Val Glu Pro Phe Thr Ser Leu His Val Gln Leu Gln Ser Gly  
 455 460 465  
 Arg Phe Asp Cys Ser Asp Arg Gln Phe His Ser Val Ala Ala Ala  
 470 475 480  
 Trp Gln Ala Arg Leu Glu Ser Pro Ala Asp Val Lys Glu Leu Ile  
 485 490 495  
 Pro Glu Phe Phe Tyr Phe Pro Asp Phe Leu Glu Asn Gln Asn Gly  
 500 505 510  
 Phe Asp Leu Gly Cys Leu Gln Leu Thr Asn Glu Lys Val Gly Asp

515	520	525
Val Val Leu Pro Pro Trp Ala Ser Ser	Pro Glu Asp Phe Ile Gln	
530	535	540
Gln His Arg Gln Ala Leu Glu Ser Glu	Tyr Val Ser Ala His Leu	
545	550	555
His Glu Trp Ile Asp Leu Ile Phe Gly	Tyr Lys Gln Arg Gly Pro	
560	565	570
Ala Ala Glu Glu Ala Leu Asn Val Phe	Tyr Tyr Cys Thr Tyr Glu	
575	580	585
Gly Ala Val Asp Leu Asp His Val Thr	Asp Glu Arg Glu Arg Lys	
590	595	600
Ala Leu Glu Gly Ile Ile Ser Asn Phe	Gly Gln Thr Pro Cys Gln	
605	610	615
Leu Leu Lys Glu Pro His Pro Thr Arg	Leu Ser Ala Glu Glu Ala	
620	625	630
Ala His Arg Leu Ala Arg Leu Asp Thr	Asn Ser Pro Ser Ile Phe	
635	640	645
Gln His Leu Asp Glu Leu Lys Ala Phe	Phe Ala Glu Val Thr Val	
650	655	660
Ser Ala Ser Gly Leu Leu Gly Thr His	Ser Trp Leu Pro Tyr Asp	
665	670	675
Arg Asn Ile Ser Asn Tyr Phe Ser Phe	Ser Lys Asp Pro Thr Met	
680	685	690
Gly Ser His Lys Thr Gln Arg Leu Leu	Ser Gly Pro Trp Val Pro	
695	700	705
Gly Ser Gly Val Ser Gly Gln Ala Leu	Ala Val Ala Pro Asp Gly	
710	715	720
Lys Leu Leu Phe Ser Gly Gly His Trp	Asp Gly Ser Leu Arg Val	
725	730	735
Thr Ala Leu Pro Arg Gly Lys Leu Leu	Ser Gln Leu Ser Cys His	
740	745	750
Leu Asp Val Val Thr Cys Leu Ala Leu	Asp Thr Cys Gly Ile Tyr	
755	760	765
Leu Ile Ser Gly Ser Arg Asp Thr Thr	Cys Met Val Trp Arg Leu	
770	775	780
Leu His Gln Gly Gly Leu Ser Val Gly	Leu Ala Pro Lys Pro Val	
785	790	795
Gln Val Leu Tyr Gly His Gly Ala Ala	Val Ser Cys Val Ala Ile	
800	805	810

Ser Thr Glu Leu Asp Met Ala Val Ser Gly Ser Glu Asp Gly Thr  
                   815                  820                  825  
 Val Ile Ile His Thr Val Arg Arg Gly Gln Phe Val Ala Ala Leu  
                   830                  835                  840  
 Arg Pro Leu Gly Ala Thr Phe Pro Gly Pro Ile Phe His Leu Ala  
                   845                  850                  855  
 Leu Gly Ser Glu Gly Gln Ile Val Val Gln Ser Ser Ala Trp Glu  
                   860                  865                  870  
 Arg Pro Gly Ala Gln Val Thr Tyr Ser Leu His Leu Tyr Ser Val  
                   875                  880                  885  
 Asn Gly Lys Leu Arg Ala Ser Leu Pro Leu Ala Glu Gln Pro Thr  
                   890                  895                  900  
 Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln  
                   905                  910                  915  
 Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala  
                   920                  925                  930  
 Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr  
                   935                  940                  945  
 Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu  
                   950                  955                  960  
 Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln  
                   965                  970                  975  
 Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val  
                   980                  985                  990  
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                   995                  1000

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50

生物信息学实验

atcatgcaac cccacggccc accttgtgaa ctccctcgta ccagggctga 100  
tgtgcgtctt ccagggctac tcatccaaag gcctaattcca acgttctgtc 150  
ttcaatctgc aaatctatgg gtcctgggg ctcttctgga cccttaactg 200  
ggtaactggcc ctgggccaat gcgtcctcg tggagccttt gcctccttct 250  
actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300  
gccttcatcc gcacactccg ttaccacact gggtcattgg catttggagc 350  
cctcatcctg acccttgtgc agatagcccc ggtcatcttg gagtatattg 400  
accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450  
tgtttcaagt gtcgcctctg gtgtctggaa aaatttatca agttcctaaa 500  
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cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600  
gtcctggaca aagtacaga cctgctgctg ttctttggga agctgctggt 650  
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aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36  
<211> 321  
<212> PRT  
<213> Homo sapiens

<400> 36  
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile  
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 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys  
 20 25 30  
 Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu  
 35 40 45  
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly  
 50 55 60  
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val  
 65 70 75  
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro  
 80 85 90  
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr  
 95 100 105  
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu  
 110 115 120  
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His  
 125 130 135  
 Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys  
 140 145 150  
 Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe  
 155 160 165  
 Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn  
 170 175 180  
 Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn  
 185 190 195  
 Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu  
 200 205 210  
 Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser  
 215 220 225  
 Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe  
 230 235 240  
 Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser  
 245 250 255  
 Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe  
 260 265 270  
 Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu  
 275 280 285

Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys  
290 295 300  
Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp  
305 310 315  
Asn Lys Lys Arg Lys Lys  
320

<210> 37  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 37  
tcgtgcccag gggctgtatgt gc 22

<210> 38  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 38  
gtctttaccc agccccggga tgcg 24

<210> 39  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 39  
ggcctaatacc aacgttctgt cttcaatctg caaatctatg gggtcctggg 50

<210> 40  
<211> 1365  
<212> DNA  
<213> Homo sapiens

<400> 40  
gagtcttgac cgccgccggg ctcttggtag ctcagcgca ggcgcaggcg 50  
tccggccgcc gggttatgt tcgtgtccga tttccgcaaa gagttctacg 100  
aggtgtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150  
gctctgtgtg cgtgcaagat cttcaggcc ttgttccagt gtgaccacgt 200  
gcaatataacg ctgggtccag tttctgggtg gcaagaactt gaaactgcat 250

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atacccgat caaattactc attaaacaag atgatgacct tgaagttccc 450  
gccttatgaag acatcttcag ggtatgaagag gaggatgaag agcattcagg 500  
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gacatcgtaa gccatggta tgttttagt ggcttggatg ctgtccaaagg 700  
acctgaatga catgctgtgg tggccatcg ttggactaac agaccagtgg 750  
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gcagcgccac gttcccgcc acaaccacccg gaacgaggat gaggagaaca 850  
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gccaccatgt ctgttgcgttggag aaggatggct cagggacac 1250  
tcacttcattc caggtctgg acagcctctc caggagtaac ctggacaac 1300  
tgtaccatgg ccttggactc gccaagaacg agctgcgagc cacccagcag 1350  
accattgcca gctgc 1365

<210> 41  
<211> 566  
<212> PRT  
<213> Homo sapiens

<400> 41  
Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln  
1 5 10 15  
Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu  
20 25 30

Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val  
                   35                  40                  45  
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr  
                   50                  55                  60  
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile  
                   65                  70                  75  
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp  
                   80                  85                  90  
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn  
                   95                  100                  105  
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys  
                   110                  115                  120  
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg  
                   125                  130                  135  
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly  
                   140                  145                  150  
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val  
                   155                  160                  165  
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg  
                   170                  175                  180  
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly  
                   185                  190                  195  
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser  
                   200                  205                  210  
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr  
                   215                  220                  225  
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr  
                   230                  235                  240  
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg  
                   245                  250                  255  
 Asn Glu Asp Glu Glu Asn Thr Leu Ser Val Asp Cys Thr Arg Ile  
                   260                  265                  270  
 Ser Phe Glu Tyr Asp Leu Arg Leu Val Leu Tyr Gln His Trp Ser  
                   275                  280                  285  
 Leu His Asp Ser Leu Cys Asn Thr Ser Tyr Thr Ala Ala Arg Phe  
                   290                  295                  300  
 Lys Leu Trp Ser Val His Gly Gln Lys Arg Leu Gln Glu Phe Leu  
                   305                  310                  315  
 Ala Asp Met Gly Leu Pro Leu Lys Gln Val Lys Gln Lys Phe Gln

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320	325	330
Ala Met Asp Ile Ser Leu Lys Glu Asn Leu Arg Glu Met Ile Glu		
335	340	345
Glu Ser Ala Asn Lys Phe Gly Met Lys Asp Met Arg Val Gln Thr		
350	355	360
Phe Ser Ile His Phe Gly Phe Lys His Lys Phe Leu Ala Ser Asp		
365	370	375
Val Val Phe Ala Thr Met Ser Leu Met Glu Ser Pro Glu Lys Asp		
380	385	390
Gly Ser Gly Thr Asp His Phe Ile Gln Ala Leu Asp Ser Leu Ser		
395	400	405
Arg Ser Asn Leu Asp Lys Leu Tyr His Gly Leu Glu Leu Ala Lys		
410	415	420
Lys Gln Leu Arg Ala Thr Gln Gln Thr Ile Ala Ser Cys Leu Cys		
425	430	435
Thr Asn Leu Val Ile Ser Gln Gly Pro Phe Leu Tyr Cys Ser Leu		
440	445	450
Met Glu Gly Thr Pro Asp Val Met Leu Phe Ser Arg Pro Ala Ser		
455	460	465
Leu Ser Leu Leu Ser Lys His Leu Leu Lys Ser Phe Val Cys Ser		
470	475	480
Thr Lys Asn Arg Arg Cys Lys Leu Leu Pro Leu Val Met Ala Ala		
485	490	495
Pro Leu Ser Met Glu His Gly Thr Val Thr Val Val Gly Ile Pro		
500	505	510
Pro Glu Thr Asp Ser Ser Asp Arg Lys Asn Phe Phe Gly Arg Ala		
515	520	525
Phe Glu Lys Ala Ala Glu Ser Thr Ser Ser Arg Met Leu His Asn		
530	535	540
His Phe Asp Leu Ser Val Ile Glu Leu Lys Ala Glu Asp Arg Ser		
545	550	555
Lys Phe Leu Asp Ala Leu Ile Ser Leu Leu Ser		
560	565	

<210> 42  
<211> 380  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 44, 118, 172, 183

EDB - DNA Sequence Database

<223> unknown base

<400> 42  
gtacctcagc gcgagcgcca ggcgtccggc cgccgtggct atgntcgtgt 50  
ccgatttccg caaagagttc tacgagggtgg tccagagcca gagggtcctt 100  
ctcttcgtgg cctcgangt ggatgctctg tgtgcgtgca agatccttca 150  
ggccttgttc cagtgtgacc angtgcaata tangctggtt ccagtttctg 200  
ggtggcaaga acttgaaact gcatttcttgc agcataaaga acagtttcat 250  
tatTTTATTc tcataaaactg tggagctaattt gtagacctat tggatattct 300  
tcaacctgat gaagacacta tattcttgt gtgtgacacc cataggccag 350  
tcaatgttgtt caatgtatac aacgataccc 380

<210> 43  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
ttccgcaaag agttctacga ggtgg 25

<210> 44  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 44  
attgacaaca ttgactggcc tatggg 26

<210> 45  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 45  
gtggatgctc tgtgtgcgtg caagatcctt caggcttgt tccagtgtga 50

<210> 46  
<211> 3089  
<212> DNA  
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<212> PRT  
<213> Homo sapiens

<400> 57  
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35 40 45  
Leu Thr Pro Ala Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu  
50 55 60  
Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg  
65 70 75  
Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys  
80 85 90  
Thr Phe Glu Phe Asn Lys Glu Leu Arg Tyr Leu Asp Leu Ser Asn  
95 100 105  
Asn Arg Leu Lys Ser Val Thr Trp Tyr Leu Leu Ala Gly Leu Arg  
110 115 120

Tyr Leu Asp Leu Ser Phe Asn Asp Phe Asp Thr Met Pro Ile Cys  
 125 130 135  
 Glu Glu Ala Gly Asn Met Ser His Leu Glu Ile Leu Gly Leu Ser  
 140 145 150  
 Gly Ala Lys Ile Gln Lys Ser Asp Phe Gln Lys Ile Ala His Leu  
 155 160 165  
 His Leu Asn Thr Val Phe Leu Gly Phe Arg Thr Leu Pro His Tyr  
 170 175 180  
 Glu Glu Gly Ser Leu Pro Ile Leu Asn Thr Thr Lys Leu His Ile  
 185 190 195  
 Val Leu Pro Met Asp Thr Asn Phe Trp Val Leu Leu Arg Asp Gly  
 200 205 210  
 Ile Lys Thr Ser Lys Ile Leu Glu Met Thr Asn Ile Asp Gly Lys  
 215 220 225  
 Ser Gln Phe Val Ser Tyr Glu Met Gln Arg Asn Leu Ser Leu Glu  
 230 235 240  
 Asn Ala Lys Thr Ser Val Leu Leu Leu Asn Lys Val Asp Leu Leu  
 245 250 255  
 Trp Asp Asp Leu Phe Leu Ile Leu Gln Phe Val Trp His Thr Ser  
 260 265 270  
 Val Glu His Phe Gln Ile Arg Asn Val Thr Phe Gly Gly Lys Ala  
 275 280 285  
 Tyr Leu Asp His Asn Ser Phe Asp Tyr Ser Asn Thr Val Met Arg  
 290 295 300  
 Thr Ile Lys Leu Glu His Val His Phe Arg Val Phe Tyr Ile Gln  
 305 310 315  
 Gln Asp Lys Ile Tyr Leu Leu Leu Thr Lys Met Asp Ile Glu Asn  
 320 325 330  
 Leu Thr Ile Ser Asn Ala Gln Met Pro His Met Leu Phe Pro Asn  
 335 340 345  
 Tyr Pro Thr Lys Phe Gln Tyr Leu Asn Phe Ala Asn Asn Ile Leu  
 350 355 360  
 Thr Asp Glu Leu Phe Lys Arg Thr Ile Gln Leu Pro His Leu Lys  
 365 370 375  
 Thr Leu Ile Leu Asn Gly Asn Lys Leu Glu Thr Leu Ser Leu Val  
 380 385 390  
 Ser Cys Phe Ala Asn Asn Thr Pro Leu Glu His Leu Asp Leu Ser  
 395 400 405  
 Gln Asn Leu Leu Gln His Lys Asn Asp Glu Asn Cys Ser Trp Pro

410	415	420
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425	430	435
Ser Val Phe Arg Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp Leu	
440	445	450
Asn Asn Asn Gln Ile Gln Thr Val Pro	Lys Glu Thr Ile His Leu	
455	460	465
Met Ala Leu Arg Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr Asp	
470	475	480
Leu Pro Gly Cys Ser His Phe Ser Arg	Leu Ser Val Leu Asn Ile	
485	490	495
Glu Met Asn Phe Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln Ser	
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Cys Gln Glu Val Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe Arg	
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Cys Thr Cys Glu Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr Ser	
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Glu Val Met Met Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu Tyr	
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Pro Leu Asn Leu Arg Gly Thr Arg Leu	Lys Asp Val His Leu His	
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Glu Leu Ser Cys Asn Thr Ala Leu Leu	Ile Val Thr Ile Val Val	
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Ile Met Leu Val Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu His	
590	595	600
Phe Asp Leu Pro Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr Gln	
605	610	615
Thr Trp His Arg Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys Arg	
620	625	630
Asn Val Arg Phe His Ala Phe Ile Ser	Tyr Ser Glu His Asp Ser	
635	640	645
Leu Trp Val Lys Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu Asp	
650	655	660
Gly Ser Ile Leu Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro Gly	
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Lys Ser Ile Ser Glu Asn Ile Val Ser	Phe Ile Glu Lys Ser Tyr	
680	685	690
Lys Ser Ile Phe Val Leu Ser Pro Asn	Phe Val Gln Asn Glu Trp	
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 740 745 750  
 Lys Lys Ala Tyr Leu Glu Trp Pro Lys Asp Arg Arg Lys Cys Gly  
 755 760 765  
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 770 775 780  
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DRAFT

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 <212> PRT  
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Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro  
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Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro
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Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu  
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 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys  
 80 85 90  
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser  
 95 100 105  
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn  
 110 115 120  
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser  
 125 130 135  
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln  
 140 145 150  
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg  
 155 160 165  
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr  
 170 175 180  
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile  
 185 190 195  
 Glu Val Asp Ala Arg Arg Leu Thr Arg Phe Thr Gly Val Ile Thr  
 200 205 210  
 Gln Gly Arg Asn Ser Leu Trp Leu Ser Asp Trp Val Thr Ser Tyr  
 215 220 225  
 Lys Val Met Val Ser Asn Asp Ser His Thr Trp Val Thr Val Lys  
 230 235 240  
 Asn Gly Ser Gly Asp Met Ile Phe Glu Gly Asn Ser Glu Lys Glu  
 245 250 255  
 Ile Pro Val Leu Asn Glu Leu Pro Val Pro Met Val Ala Arg Tyr  
 260 265 270  
 Ile Arg Ile Asn Pro Gln Ser Trp Phe Asp Asn Gly Ser Ile Cys  
 275 280 285  
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 290 295 300  
 Tyr Tyr His Arg Arg Asn Glu Met Thr Thr Thr Asp Asp Leu Asp  
 305 310 315  
 Phe Lys His His Asn Tyr Lys Glu Met Arg Gln Leu Met Lys Val  
 320 325 330  
 Val Asn Glu Met Cys Pro Asn Ile Thr Arg Ile Tyr Asn Ile Gly  
 335 340 345  
 Lys Ser His Gln Gly Leu Lys Leu Tyr Ala Val Glu Ile Ser Asp

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365	370	375
Ala Gly Ala His Gly Asn Glu Val Leu Gly Arg Glu Leu Leu Leu		
380	385	390
Leu Leu Val Gln Phe Val Cys Gln Glu Tyr Leu Ala Arg Asn Ala		
395	400	405
Arg Ile Val His Leu Val Glu Glu Thr Arg Ile His Val Leu Pro		
410	415	420
Ser Leu Asn Pro Asp Gly Tyr Glu Lys Ala Tyr Glu Gly Gly Ser		
425	430	435
Glu Leu Gly Gly Trp Ser Leu Gly Arg Trp Thr His Asp Gly Ile		
440	445	450
Asp Ile Asn Asn Asn Phe Pro Asp Leu Asn Thr Leu Leu Trp Glu		
455	460	465
Ala Glu Asp Arg Gln Asn Val Pro Arg Lys Val Pro Asn His Tyr		
470	475	480
Ile Ala Ile Pro Glu Trp Phe Leu Ser Glu Asn Ala Thr Val Ala		
485	490	495
Ala Glu Thr Arg Ala Val Ile Ala Trp Met Glu Lys Ile Pro Phe		
500	505	510
Val Leu Gly Gly Asn Leu Gln Gly Gly Glu Leu Val Val Ala Tyr		
515	520	525
Pro Tyr Asp Leu Val Arg Ser Pro Trp Lys Thr Gln Glu His Thr		
530	535	540
Pro Thr Pro Asp Asp His Val Phe Arg Trp Leu Ala Tyr Ser Tyr		
545	550	555
Ala Ser Thr His Arg Leu Met Thr Asp Ala Arg Arg Arg Val Cys		
560	565	570
His Thr Glu Asp Phe Gln Lys Glu Glu Gly Thr Val Asn Gly Ala		
575	580	585
Ser Trp His Thr Val Ala Gly Ser Leu Asn Asp Phe Ser Tyr Leu		
590	595	600
His Thr Asn Cys Phe Glu Leu Ser Ile Tyr Val Gly Cys Asp Lys		
605	610	615
Tyr Pro His Glu Ser Gln Leu Pro Glu Glu Trp Glu Asn Asn Arg		
620	625	630
Glu Ser Leu Ile Val Phe Met Glu Gln Val His Arg Gly Ile Lys		
635	640	645

Gly Leu Val Arg Asp Ser His Gly Lys Gly Ile Pro Asn Ala Ile  
650 655 660  
Ile Ser Val Glu Gly Ile Asn His Asp Ile Arg Thr Ala Asn Asp  
665 670 675  
Gly Asp Tyr Trp Arg Leu Leu Asn Pro Gly Glu Tyr Val Val Thr  
680 685 690  
Ala Lys Ala Glu Gly Phe Thr Ala Ser Thr Lys Asn Cys Met Val  
695 700 705  
Gly Tyr Asp Met Gly Ala Thr Arg Cys Asp Phe Thr Leu Ser Lys  
710 715 720  
Thr Asn Met Ala Arg Ile Arg Glu Ile Met Glu Lys Phe Gly Lys  
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<210> 66

<211> 2854  
<212> DNA  
<213> Homo sapiens

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<211> 510

<212> PRT

<213> Homo sapiens

<400> 67

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Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser  
35 40 45

Phe Ser Ser Ser Arg Ser Gly Ser Ser Ser Arg Ser Leu  
50 55 60

Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly  
65 70 75

Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro  
80 85 90

Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr  
95 100 105

Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val  
110 115 120

Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu  
125 130 135

Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser  
140 145 150

Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu  
155 160 165

Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser  
170 175 180

Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr  
185 190 195

Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu  
200 205 210

Ala Ile Arg Arg Glu Ile Val Ala Leu Lys Thr Lys Leu Lys Glu  
215 220 225

Cys Glu Ala Ser Lys Asp Gln Asn Thr Pro Val Val His Pro Pro  
230 235 240

Pro Thr Pro Gly Ser Cys Gly His Gly Gly Val Val Asn Ile Ser  
                   245                  250                  255  
 Lys Pro Ser Val Val Gln Leu Asn Trp Arg Gly Phe Ser Tyr Leu  
                   260                  265                  270  
 Tyr Gly Ala Trp Gly Arg Asp Tyr Ser Pro Gln His Pro Asn Lys  
                   275                  280                  285  
 Gly Leu Tyr Trp Val Ala Pro Leu Asn Thr Asp Gly Arg Leu Leu  
                   290                  295                  300  
 Glu Tyr Tyr Arg Leu Tyr Asn Thr Leu Asp Asp Leu Leu Leu Tyr  
                   305                  310                  315  
 Ile Asn Ala Arg Glu Leu Arg Ile Thr Tyr Gly Gln Gly Ser Gly  
                   320                  325                  330  
 Thr Ala Val Tyr Asn Asn Asn Met Tyr Val Asn Met Tyr Asn Thr  
                   335                  340                  345  
 Gly Asn Ile Ala Arg Val Asn Leu Thr Thr Asn Thr Ile Ala Val  
                   350                  355                  360  
 Thr Gln Thr Leu Pro Asn Ala Ala Tyr Asn Asn Arg Phe Ser Tyr  
                   365                  370                  375  
 Ala Asn Val Ala Trp Gln Asp Ile Asp Phe Ala Val Asp Glu Asn  
                   380                  385                  390  
 Gly Leu Trp Val Ile Tyr Ser Thr Glu Ala Ser Thr Gly Asn Met  
                   395                  400                  405  
 Val Ile Ser Lys Leu Asn Asp Thr Thr Leu Gln Val Leu Asn Thr  
                   410                  415                  420  
 Trp Tyr Thr Lys Gln Tyr Lys Pro Ser Ala Ser Asn Ala Phe Met  
                   425                  430                  435  
 Val Cys Gly Val Leu Tyr Ala Thr Arg Thr Met Asn Thr Arg Thr  
                   440                  445                  450  
 Glu Glu Ile Phe Tyr Tyr Asp Thr Asn Thr Gly Lys Glu Gly  
                   455                  460                  465  
 Lys Leu Asp Ile Val Met His Lys Met Gln Glu Lys Val Gln Ser  
                   470                  475                  480  
 Ile Asn Tyr Asn Pro Phe Asp Gln Lys Leu Tyr Val Tyr Asn Asp  
                   485                  490                  495  
 Gly Tyr Leu Leu Asn Tyr Asp Leu Ser Val Leu Gln Lys Pro Gln  
                   500                  505                  510

<210> 68  
 <211> 410  
 <212> DNA  
 <213> Homo sapiens

<220>  
<221> unsure  
<222> 206, 217, 387  
<223> unknown base

<400> 68  
gctctgaaga ccaagctgaa agagtgttag gcctctaaag atcaaacacc 50  
cctgtcgatcc acccttcctcc cactccaggg agctgtggtc atgggttgtt 100  
ggtaaacatc agcaaaccgt ctgtggttca gctcaactgg agagggtttt 150  
cttatctata tggtgcttgg ggttagggatt actctccccca gcatccaaac 200  
aaaggatgtt attgggnggc gccattgaat acagatggga gactgttgg 250  
gtattataga ctgtacaacc cactggatga tttgctattt tatataaatg 300  
ctcgagagtt gcggatcacc tatggccaag gtatgtgtac agcagtttac 350  
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400  
taacctgacc 410

<210> 69  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 69  
agctgtggtc atgggttgtt ggtg 24

<210> 70  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 70  
ctaccttggc cataggtgat ccgc 24

<210> 71  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 71  
catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127  
<212> DNA  
<213> Homo sapiens

<400> 72  
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tcttgtctgt atccgctgct cttgtacgt tgtggagatg gggagcgtcc 100  
tggggctgtg ctccatggcg agctggatac catgttgc tggaagtgcc 150  
ccgtgtttgc tatgccatgc ctgtcctagt ggaaacaact ccactgtaac 200  
tagattgatc tatgcacttt tcttgcttgc tggagtatgt gtagcttgc 250  
taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300  
tgtgagaatg agaaagggtgt tgccttgc aacattttgg ttggctataa 350  
agctgtatat cgtttgcctt ttggtttggc tatgttctat cttttctct 400  
cttactaat gatcaaagtg aagagtagca gtgatcctag agctgcagt 450  
cacaatggat tttggttctt taaatttgc gcagcaatttgc caatttttat 500  
tggggcattt ttcattccag aaggaacttt tacaactgtg tggttttagt 550  
taggcattgc aggtgcctt tggatcatcc tcatacaact agtcttactt 600  
attgattttg cacattcatg gaatgaatcg tgggttggaa aaatggaaaga 650  
agggaaactcg agatgttggt atgcagccctt gttatcagct acagctctga 700  
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catccagcca gttgttcaga aaacaaggcg ttcatcagtg tcaacatgct 800  
cctctgcgtt ggtgttctg taatgtctat actgccaaa atccaagaat 850  
cacaaccaag atctggtttgc ttacagtctt cagtaattac agtctacaca 900  
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aagatggtgg agctagaagt gatggatcac tggaggatgg ggacgtgtt 1200  
caccgagctg tagataatga aagggtgggt gtcacttaca gttattcctt 1250  
ctttcacttc atgctttcc tggatcatc ttatcatg atgaccctta 1300  
ccaaactggtc caggtatgaa ccctctcggtt agatgaaaag tcagtgac 1350

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gctgtctggg tgaaaatctc ttccagttgg attggcatcg tgctgtatgt 1400  
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tgagacttct agcatgaaag tcccactttg attattgctt atttgaaaac 1500  
agtattccca actttgtaa agttgtgtat gttttgctt cccatgtaac 1550  
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attctctgct ctatagttgt gaaatgaaga gtaaaaaacaa atttgttga 1750  
ctattttaaa attatattag acctaagct gtttagcaa gcattaaagc 1800  
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tgcaaagaac atggtttatt taaaattta taaacaagtc acttaaatgc 1900  
cagttgtctg aaaaatcttta taaggttta cccttgatac ggaatttaca 1950  
caggtaggaa gtgttagtg gacaatagtg tagttatgg atggaggtgt 2000  
cggtactaaa ttgaataacg agtaaataat cttacttggg tagagatggc 2050  
cttgccaac aaagtgaact gtttgggtt gtttaactc atgaagtatg 2100  
ggttcagtgg aaatgttgg aactctgaag gatttagaca aggtttgaa 2150  
aaggataatc atgggttaga aggaagtgtt ttgaaagtca cttgaaaagt 2200  
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gtggccagc actgagaggc tagtgaagat tgctgagccc agagccaaag 2400  
gttgcagtga gcaagtcacg tcactgcact ctagctggca cagagtaac 2450  
caaaaaaaaata tatatatatt gaaatcaagg aggaaaaatt ttgacaggaa 2500  
aggaagtaac tgcaaaacca ctaggcttta gtaggtactt atataaaaatc 2550  
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aatagctcag atagctaatt agggaaattc aagttggcca ataatagcat 2650  
tctctctgac attaaaaat aatttctatt caaaatacat gcatattgtat 2700  
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cctgcttata gtatactaca cagttcaaaa gatgttaaa atgctttgt 2850  
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tagacattgt attccacaat tttgaatggc tgtgtttac ctctaaataa 3100  
atgaattcag agaaaaaaaaaaaaa 3127

<210> 73  
<211> 453  
<212> PRT  
<213> Homo sapiens

<400> 73  
Met Gly Ser Val Leu Gly Leu Cys Ser Met Ala Ser Trp Ile Pro  
1 5 10 15  
Cys Leu Cys Gly Ser Ala Pro Cys Leu Leu Cys Arg Cys Cys Pro  
20 25 30  
Ser Gly Asn Asn Ser Thr Val Thr Arg Leu Ile Tyr Ala Leu Phe  
35 40 45  
Leu Leu Val Gly Val Cys Val Ala Cys Val Met Leu Ile Pro Gly  
50 55 60  
Met Glu Glu Gln Leu Asn Lys Ile Pro Gly Phe Cys Glu Asn Glu  
65 70 75  
Lys Gly Val Val Pro Cys Asn Ile Leu Val Gly Tyr Lys Ala Val  
80 85 90  
Tyr Arg Leu Cys Phe Gly Leu Ala Met Phe Tyr Leu Leu Leu Ser  
95 100 105  
Leu Leu Met Ile Lys Val Lys Ser Ser Ser Asp Pro Arg Ala Ala  
110 115 120  
Val His Asn Gly Phe Trp Phe Phe Lys Phe Ala Ala Ala Ile Ala  
125 130 135  
Ile Ile Ile Gly Ala Phe Phe Ile Pro Glu Gly Thr Phe Thr Thr  
140 145 150  
Val Trp Phe Tyr Val Gly Met Ala Gly Ala Phe Cys Phe Ile Leu  
155 160 165  
Ile Gln Leu Val Leu Leu Ile Asp Phe Ala His Ser Trp Asn Glu  
170 175 180  
Ser Trp Val Glu Lys Met Glu Glu Gly Asn Ser Arg Cys Trp Tyr  
185 190 195

Ala Ala Leu Leu Ser Ala Thr Ala Leu Asn Tyr Leu Leu Ser Leu  
 200 205 210  
 Val Ala Ile Val Leu Phe Phe Val Tyr Tyr Thr His Pro Ala Ser  
 215 220 225  
 Cys Ser Glu Asn Lys Ala Phe Ile Ser Val Asn Met Leu Leu Cys  
 230 235 240  
 Val Gly Ala Ser Val Met Ser Ile Leu Pro Lys Ile Gln Glu Ser  
 245 250 255  
 Gln Pro Arg Ser Gly Leu Leu Gln Ser Ser Val Ile Thr Val Tyr  
 260 265 270  
 Thr Met Tyr Leu Thr Trp Ser Ala Met Thr Asn Glu Pro Glu Thr  
 275 280 285  
 Asn Cys Asn Pro Ser Leu Leu Ser Ile Ile Gly Tyr Asn Thr Thr  
 290 295 300  
 Ser Thr Val Pro Lys Glu Gly Gln Ser Val Gln Trp Trp His Ala  
 305 310 315  
 Gln Gly Ile Ile Gly Leu Ile Leu Phe Leu Leu Cys Val Phe Tyr  
 320 325 330  
 Ser Ser Ile Arg Thr Ser Asn Asn Ser Gln Val Asn Lys Leu Thr  
 335 340 345  
 Leu Thr Ser Asp Glu Ser Thr Leu Ile Glu Asp Gly Gly Ala Arg  
 350 355 360  
 Ser Asp Gly Ser Leu Glu Asp Gly Asp Asp Val His Arg Ala Val  
 365 370 375  
 Asp Asn Glu Arg Asp Gly Val Thr Tyr Ser Tyr Ser Phe Phe His  
 380 385 390  
 Phe Met Leu Phe Leu Ala Ser Leu Tyr Ile Met Met Thr Leu Thr  
 395 400 405  
 Asn Trp Ser Arg Tyr Glu Pro Ser Arg Glu Met Lys Ser Gln Trp  
 410 415 420  
 Thr Ala Val Trp Val Lys Ile Ser Ser Ser Trp Ile Gly Ile Val  
 425 430 435  
 Leu Tyr Val Trp Thr Leu Val Ala Pro Leu Val Leu Thr Asn Arg  
 440 445 450  
 Asp Phe Asp

<210> 74  
 <211> 480  
 <212> DNA  
 <213> Homo sapiens

<220>  
<221> unsure  
<222> 48, 163  
<223> unknown base

<400> 74  
gcgagaaaga agctgtctcc atcttgtctg tatcccgctg cttcttgnga 50  
cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100  
ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150  
tagtggaaac aantccactg taactagatt gatctatgca cttttcttgc 200  
ttgttggagt atgtgttagct tgtgtaatgt tgataccagg aatggaagaa 250  
caactgaata agattcctgg attttgtgag aatgagaaag gtgttgc 300  
ttgtaacatt ttgggtggct ataaagctgt atatcgtttgc tgctttggtt 350  
tggctatgtt ctatcttctt ctctcttac taatgatcaa agtgaagagt 400  
agcagtgatc ctagagctgc agtgcacaat ggattttggc tctttaaatt 450  
tgctgcagca attgcaatta ttattggggc 480

<210> 75  
<211> 438  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323  
<223> unknown base

<400> 75  
gttattgtga actttgtga gatgggaggt cttttttttt gttccatgg 50  
cgagctggat accangtttgc tgtggaaatgtt cccgtgttt gntatgccga 100  
tgctgtccta gtggaaacaa ntccactgtt attagattgtt tntatgcact 150  
tttnttgctt gttggagttt gtgttagcttgc tgtaatgttgc ataccaggaa 200  
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250  
gttggccctt gtaacattttt ggttggctat aaagctgtat atngttgtg 300  
ctttggtttgc gctangttctt atnttcttctt ctctttacta atgatcaaag 350  
tgaagagtag cagtgtatcctt agagctgcag tgcacaatgg attttggttt 400  
tttttttttttgcagcaat tgcaattattt attggggc 438

<210> 76  
<211> 473  
<212> DNA

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<213> Homo sapiens

<220>

<221> unsure

<222> 48

<223> unknown base

<400> 76  
aagaagctgt ctccatcttgc tctgtatccg ctgctcttgt gaacgttnng 50  
gagatgggaa gcgtccttgg gggttgtgctc catggcgagc tggataccat 100  
gtttgtgtgg aagtccccgg tggttgctat gccgatgctg tccttagtgg 150  
aacaactcca ctgtaactag attgatctat gcactttct tgcttgg 200  
agtatgtgtta gcttggtaa tggtgataacc aggaatggaa gaacaactga 250  
ataagattcc tggattttgt gagaatgaga aagggttgttgc cccttgttaac 300  
attttggttg gctataaagc tgtatatcgt ttgtgcttgc gtttggctat 350  
gttctatctt cttctctt tactaatgtat caaagtgaag agtagcagtgc 400  
atccttagagc tgcagtgcac aatggatttt gggtctttaa atttgctgca 450  
gcaattgcaa ttattattgg ggc 473

<210> 77

<211> 666

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 21, 111

<223> unknown base

<400> 77  
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acttttcct tgcttgg 77 agtatgtgtta gcttggat atgttgg 100  
caggatttggaa ngttccaaactg aataagattc ctggattttt gtgagaatga 150  
gaaagggtttt gtccccttgtt aacattttt gttggctata aagctgtata 200  
tcgtttgtgc tttggttgg ctatgttcta tcttcttctc tctttactaa 250  
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgg 300  
ttttgggttct ttaaatttgc tgcagcaattt gcaatttatta ttggggcatt 350  
cttcattcca gaaggaactt ttacaactgt gtggttttat gtggcatgg 400  
caggtgcctt ttgtttcatc ctcataacaac tagtcttact tattgatttt 450  
gcacattcat ggaatgaatc gtgggttgaa aaaatggaaag aagggaactc 500

gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550  
tgtcttagt tgctatcgac ctgttcttg tctactacac tcataccagcc 600  
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650  
tggtgcttct gtaatg 666

<210> 78  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 78  
atgtttgtgt ggaagtgcgg cg 22

<210> 79  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 79  
gtcaacatgc tcctctgc 18

<210> 80  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 80  
aatccattgt gcactgcagc tctagg 26

<210> 81  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
gagcatgcgc ccactggact gac 23

<210> 82  
<211> 54  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 82  
gccgatgctg tcctagtgga aacaactcca ctgttaactag attgatotat 50  
gcac 54

<210> 83  
<211> 3906  
<212> DNA  
<213> Homo sapiens

<400> 83  
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gcggccggcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100  
cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggcgagtc 150  
ctgtgaaagc agataaaaaga aaacatttat taacgtgtca ttacgagggg 200  
agcgcccggc cggggctgtc gcactccccg cgaaacattt ggctccctcc 250  
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gcacacaagg ctctggctcg ctccctccc tcgtttccag ctccctggcg 450  
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gacgcaacct gagactccccg catcccaaaa gaagcaccag atcagcaaaa 600  
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cgccctcctg gcagggcacag cacgagagcc gcaccttgc cgtgtacctc 1000  
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aagcacggct ccgactactc caaggattac ctcacagacc tcacatcaccaa 1200  
tgacagcggt agcttcttcc gcacgtccaa gaagatgtac ccgcacagggc 1250  
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gccccacaat attcacgcct cttcccaaac gcatctcagc acatcacgcc 1350  
gagctacaac tacgcgccc acccggacaa acactggatc atgcgttaca 1400  
cggggccat gaagccatc cacatggat tcaccaacat gctccagcgg 1450  
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gaggagaact ttctgccaa gtaccagcgt gtgaaggacc tgtgtcagcg 1950  
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gaccacgaga ttgaaaccct gcagaacaaa attaagaacc tgaggaaagt 2550  
ccgaggtcac ctgaagaaaa agcggccaga agaatgtgac tgcacaaaa 2600

tcagctacca cacccagcac aaaggccgcc tcaagcacag aggctcoagt 2650  
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gcgggagcag aagcgcaaga agaaactccg caagctgctc aagcgctgc 2750  
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aaccagcaact ggcagacggc gcctttctgg acactggggc ctttctgtgc 2850  
ctgcaccagc gccaacaata acacgtactg gtgcattgagg accatcaatg 2900  
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 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly  
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 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly  
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 140 145 150  
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys  
 155 160 165  
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys  
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 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu  
 185 190 195  
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 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro  
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 230 235 240  
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn  
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 Pro Asp Lys His Trp Ile Met Arg Tyr Thr Gly Pro Met Lys Pro  
 260 265 270  
 Ile His Met Glu Phe Thr Asn Met Leu Gln Arg Lys Arg Leu Gln  
 275 280 285

Thr Leu Met Ser Val Asp Asp Ser Met Glu Thr Ile Tyr Asn Met  
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 Lys Ser Met Pro Tyr Glu Phe Asp Ile Arg Val Pro Phe Tyr Val  
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 Arg Gly Pro Asn Val Glu Ala Gly Cys Leu Asn Pro His Ile Val  
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 Asp Thr Glu Arg Pro Val Asn Arg Phe His Leu Lys Lys Lys Met  
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 Arg Val Trp Arg Asp Ser Phe Leu Val Glu Arg Gly Lys Leu Leu  
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 His Lys Arg Asp Asn Asp Lys Val Asp Ala Gln Glu Glu Asn Phe  
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 Tyr Gln Thr Ala Cys Glu Gln Leu Gly Gln Lys Trp Gln Cys Val  
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 560 565 570  
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Ile Asp His Glu Ile Glu Thr Leu Gln Asn Lys Ile Lys Asn Leu			
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Asp Cys His Lys Ile Ser Tyr His Thr Gln His Lys Gly Arg Leu			
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Gln Thr Ala Pro Phe Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr			
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Ser Ala Asn Asn Asn Thr Tyr Trp Cys Met Arg Thr Ile Asn Glu			
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Thr His Asn Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu			
770	775		780
Tyr Phe Asp Leu Asn Thr Asp Pro Tyr Gln Leu Met Asn Ala Val			
785	790		795
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Thr Arg Asn Met Asp Leu Asp Gly Gly Ser Tyr Glu Gln Tyr Arg			
830	835		840
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<223> Synthetic oligonucleotide probe

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<400> 89  
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<212> PRT  
<213> Homo sapiens

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Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg  
35 40 45  
Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro  
50 55 60  
Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His Arg His  
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Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His  
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Pro His Arg His His Pro Arg His Ala Arg  
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<212> DNA  
<213> Homo sapiens

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aagtgagtgc tgggtcaccc cccatccgca acgtcactgt ggcctacaag 200  
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<210> 97

<211> 313

<212> PRT

<213> Homo sapiens

<400> 97

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Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn  
35 40 45

Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr  
50 55 60

Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg  
65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp  
80 85 90

Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu  
95 100 105

Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe  
110 115 120

Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr  
125 130 135

Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg  
140 145 150

Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys  
155 160 165

Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe  
170 175 180

Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met  
185 190 195

Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp  
200 205 210

Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser  
215 220 225

Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala  
230 235 240

Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly  
245 250 255

Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly  
260 265 270

Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly  
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<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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<210> 99

<211> 201

<212> PRT

<213> Homo sapiens

<400> 99

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His Ile His Tyr Thr Gly Ser Leu Val Asp	Gly Arg Ile Ile Asp	
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Thr Ser Leu Thr Arg Asp Pro Leu Val Ile	Glu Leu Gly Gln Lys	
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Gln Val Ile Pro Gly Leu Glu Gln Ser	Leu Leu Asp Met Cys	Val
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Gly Glu Lys Arg Arg Ala Ile Ile Pro	Ser His Leu Ala Tyr	Gly
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Lys Arg Gly Phe Pro Pro Ser Val Pro	Ala Asp Ala Val Val	Gln
125	130	135
Tyr Asp Val Glu Leu Ile Ala Leu Ile	Arg Ala Asn Tyr Trp	Leu
140	145	150
Lys Leu Val Lys Gly Ile Leu Pro Leu	Val Gly Met Ala Met	Val
155	160	165
Pro Ala Leu Leu Gly Leu Ile Gly Tyr	His Leu Tyr Arg Lys	Ala
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Asn Lys Ser Lys Lys Lys		
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 <211> 705  
 <212> DNA  
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<211> 543  
<212> DNA  
<213> Homo sapiens

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<211> 1316  
<212> DNA  
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<211> 157  
<212> PRT  
<213> Homo sapiens

<400> 103  
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 Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly  
                   50                        55                        60  
 Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn  
                   65                        70                        75  
 Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln  
                   80                        85                        90  
 Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe  
                   95                        100                       105  
 Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val  
                   110                       115                       120  
 Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe  
                   125                       130                       135  
 Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly  
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 <211> 545  
 <212> DNA  
 <213> Homo sapiens

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<210> 105  
 <211> 490  
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 31, 39, 108, 145, 179, 219, 412, 479

<223> unknown base

<400> 105

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tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200

atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250

ccgaggtgat agttacagtg aaggttgttt gggtaaaca ggtgctcgca 300

tttggctttt cgttggtttc atgttggcct ttggatctct gattgcattt 350

atgtggattc ttttggagg ttatgttgct aaagaaaaag acatagtata 400

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tggttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106

<211> 466

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 26, 38, 81, 115, 207, 329, 380, 446, 449

<223> unknown base

<400> 106

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acaggggttgtt ggattatcat agatgcagct gtatatttc ccaccatgaa 200

agattttaac cactcataacc atgcctgtgg tgttatagca accatagcct 250

tcctaattatgta taatgcagta tcgaatggac aagtccgagg tgatagttac 300

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tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

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atttttccag aatgcc 466

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<212> DNA  
<213> Homo sapiens

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<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356  
<223> unknown base

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taaagnaaaaa gacatagttt accctgt 377

<210> 108  
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<212> DNA  
<213> Homo sapiens

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<221> unsure  
<222> 12, 25, 65, 130, 437, 537  
<223> unknown base

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tggtgtacta ttttttacag gctgggtggat tatcatagat gcagctgtta 250  
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<223> Synthetic oligonucleotide probe

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<210> 111  
<211> 46  
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<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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<210> 112  
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<212> DNA  
<213> Homo sapiens

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aaaa 3004

<210> 113  
<211> 610  
<212> PRT  
<213> Homo sapiens

<400> 113  
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Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro

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Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser			
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Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser			
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Gly Phe Gly Gly Leu Ala Ala Ala Ile Leu Ala Lys Ala Gly			
80	85	90	
Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys			
95	100	105	
Cys His Thr Phe Gly Lys Asn Gly Leu Glu Phe Asp Thr Gly Ile			
110	115	120	
His Tyr Ile Gly Arg Met Glu Glu Gly Ser Ile Gly Arg Phe Ile			
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Leu Asp Gln Ile Thr Glu Gly Gln Leu Asp Trp Ala Pro Leu Ser			
140	145	150	
Ser Pro Phe Asp Ile Met Val Leu Glu Gly Pro Asn Gly Arg Lys			
155	160	165	
Glu Tyr Pro Met Tyr Ser Gly Glu Lys Ala Tyr Ile Gln Gly Leu			
170	175	180	
Lys Glu Lys Phe Pro Gln Glu Glu Ala Ile Ile Asp Lys Tyr Ile			
185	190	195	
Lys Leu Val Lys Val Val Ser Ser Gly Ala Pro His Ala Ile Leu			
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Gly Leu Leu Thr Arg Phe Ser Pro Phe Leu Gln Ala Ser Thr Gln			
230	235	240	
Ser Leu Ala Glu Val Leu Gln Gln Leu Gly Ala Ser Ser Glu Leu			
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Gln Ala Val Leu Ser Tyr Ile Phe Pro Thr Tyr Gly Val Thr Pro			
260	265	270	
Asn His Ser Ala Phe Ser Met His Ala Leu Leu Val Asn His Tyr			
275	280	285	
Met Lys Gly Gly Phe Tyr Pro Arg Gly Gly Ser Ser Glu Ile Ala			
290	295	300	
Phe His Thr Ile Pro Val Ile Gln Arg Ala Gly Gly Ala Val Leu			
305	310	315	

Thr Lys Ala Thr Val Gln Ser Val Leu Leu Asp Ser Ala Gly Lys  
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 Tyr Cys Pro Ile Val Val Ser Asn Ala Gly Leu Phe Asn Thr Tyr  
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 Glu His Leu Leu Pro Gly Asn Ala Arg Cys Leu Pro Gly Val Lys  
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 Gln Gln Leu Gly Thr Val Arg Pro Gly Leu Gly Met Thr Ser Val  
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 Phe Ile Cys Leu Arg Gly Thr Lys Glu Asp Leu His Leu Pro Ser  
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 Thr Asn Tyr Tyr Val Tyr Tyr Asp Thr Asp Met Asp Gln Ala Met  
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 Glu Arg Tyr Val Ser Met Pro Arg Glu Glu Ala Ala Glu His Ile  
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 Pro Leu Leu Phe Phe Ala Phe Pro Ser Ala Lys Asp Pro Thr Trp  
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 Glu Asp Arg Phe Pro Gly Arg Ser Thr Met Ile Met Leu Ile Pro  
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 Thr Ala Tyr Glu Trp Phe Glu Glu Trp Gln Ala Glu Leu Lys Gly  
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 Lys Arg Gly Ser Asp Tyr Glu Thr Phe Lys Asn Ser Phe Val Glu  
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 Ala Ser Met Ser Val Val Leu Lys Leu Phe Pro Gln Leu Glu Gly  
                   500                  505                  510  
 Lys Val Glu Ser Val Thr Ala Gly Ser Pro Leu Thr Asn Gln Phe  
                   515                  520                  525  
 Tyr Leu Ala Ala Pro Arg Gly Ala Cys Tyr Gly Ala Asp His Asp  
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 Leu Gly Arg Leu His Pro Cys Val Met Ala Ser Leu Arg Ala Gln  
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 Ser Pro Ile Pro Asn Leu Tyr Leu Thr Gly Gln Asp Ile Phe Thr  
                   560                  565                  570  
 Cys Gly Leu Val Gly Ala Leu Gln Gly Ala Leu Leu Cys Ser Ser  
                   575                  580                  585  
 Ala Ile Leu Lys Arg Asn Leu Tyr Ser Asp Leu Lys Asn Leu Asp  
                   590                  595                  600  
 Ser Arg Ile Arg Ala Gln Lys Lys Lys Asn

605

610

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<212> DNA  
<213> Homo sapiens

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<210> 115  
<211> 301  
<212> PRT  
<213> Homo sapiens

<400> 115  
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Glu Ser Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val  
35 40 45  
Lys Asp His Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe  
50 55 60  
Leu Asp Ser Glu Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu  
65 70 75  
Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp  
80 85 90  
Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu  
95 100 105  
Glu Pro Lys Lys Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly  
110 115 120  
Thr Ala His Gly Glu Pro Cys His Phe Pro Phe Leu Phe Leu Asp  
125 130 135  
Lys Glu Tyr Asp Glu Cys Thr Ser Asp Gly Arg Glu Asp Gly Arg  
140 145 150  
Leu Trp Cys Ala Thr Thr Tyr Asp Tyr Lys Ala Asp Glu Lys Trp  
155 160 165

Gly Phe Cys Glu Thr Glu Glu Ala Ala Lys Arg Arg Gln Met  
170 175 180  
Gln Glu Ala Glu Met Met Tyr Gln Thr Gly Met Lys Ile Leu Asn  
185 190 195  
Gly Ser Asn Lys Lys Ser Gln Lys Arg Glu Ala Tyr Arg Tyr Leu  
200 205 210  
Gln Lys Ala Ala Ser Met Asn His Thr Lys Ala Leu Glu Arg Val  
215 220 225  
Ser Tyr Ala Leu Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln  
230 235 240  
Ala Ala Arg Glu Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro  
245 250 255  
Lys Gly Gln Thr Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly  
260 265 270  
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Ala Leu Gly Gly Asn Leu Ile Ala His Met Val Leu Val Ser Arg  
290 295 300  
Leu

<210> 116  
<211> 584  
<212> DNA  
<213> Homo sapiens

<400> 116  
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<210> 117

<211> 123

<212> PRT

<213> Homo sapiens

<400> 117

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Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln  
35 40 45

His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg  
50 55 60

Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu  
65 70 75

Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala  
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Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val  
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Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly  
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Phe Ser Pro

<210> 118

<211> 3402

<212> DNA

<213> Homo sapiens

<400> 118

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tgacgcccag cccccctgttg ctgctcctgc tgccgcccgt gctgctgggg 200

gccttcccac cggccgcccgc cggccgagggc cccccaaaga tggcggacaa 250

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gaagggtgaag caggtggagc gggaggatgc cggcgtgtac gtgtgcaagg 450

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 Gly Thr Ala Arg Asp Arg Ser Gly Asp Lys Asp Leu Pro Ser Leu  
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 Ala Gly Pro Lys Leu Tyr Pro Lys Leu Tyr Thr Asp Ile His Thr  
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Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe  
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Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp  
65 70 75

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 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr  
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 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val  
                   125                    130                    135  
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg  
                   140                    145                    150  
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys  
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 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu  
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 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys  
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 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly  
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 Ala Ala Ile Tyr Leu Leu Thr Lys Thr Pro Lys Leu Leu Thr Gln  
                   245                    250                    255  
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 Gly Lys Ser Ile Leu Lys Ile Thr Lys Val Lys Phe Ala Pro Ile  
                   275                    280                    285  
 Val Leu Thr Met Pro Lys Thr Ser Leu Lys Ala Ala Thr Ile Lys  
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 Glu Thr Lys Ala Arg Arg Ala Gly Gln Ser Val Ser Leu Cys Cys  
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 Lys Ala Thr Gly Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His  
                   335                    340                    345  
 Asn Asp Thr Leu Leu Asp Pro Ser Leu Tyr Lys His Glu Ser Lys  
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 Leu Val Leu Arg Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe

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380	385	390
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395	400	405
Pro Glu Ser Tyr Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn		
410	415	420
Ala Thr Asn Ser Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys		
425	430	435
Thr Cys Ala Gly Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala		
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Val Gln Asn Cys Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile		
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Gln Cys Ser Gly Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys		
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Ser Cys Gln Arg Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg		
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Val Ser Ala Ala Asp Asn Gly Glu Pro Met Arg Phe Gly His Val		
500	505	510
Tyr Met Gly Asn Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr		
515	520	525
Phe Thr Leu His Val Pro Gln Asp Thr Glu Arg Leu Val Leu Thr		
530	535	540
Phe Val Asp Arg Leu Gln Lys Phe Val Asn Thr Thr Lys Val Leu		
545	550	555
Pro Phe Asn Lys Lys Gly Ser Ala Val Phe His Glu Ile Lys Met		
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Leu Arg Arg Lys Glu Pro Ile Thr Leu Glu Ala Met Glu Thr Asn		
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Ile Ile Pro Leu Gly Glu Val Val Gly Glu Asp Pro Met Ala Glu		
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Leu Glu Ile Pro Ser Arg Ser Phe Tyr Arg Gln Asn Gly Glu Pro		
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Tyr Ile Gly Lys Val Lys Ala Ser Val Thr Phe Leu Asp Pro Arg		
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Asn Ile Ser Thr Ala Thr Ala Ala Gln Thr Asp Leu Asn Phe Ile		
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Asn Asp Glu Gly Asp Thr Phe Pro Leu Arg Thr Tyr Gly Met Phe		
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Ser Val Asp Phe Arg Asp Glu Val Thr Ser Glu Pro Leu Asn Ala  
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 Gly Lys Val Lys Val His Leu Asp Ser Thr Gln Val Lys Met Pro  
 680 685 690  
 Glu His Ile Ser Thr Val Lys Leu Trp Ser Leu Asn Pro Asp Thr  
 695 700 705  
 Gly Leu Trp Glu Glu Gly Asp Phe Lys Phe Glu Asn Gln Arg  
 710 715 720  
 Arg Asn Lys Arg Glu Asp Arg Thr Phe Leu Val Gly Asn Leu Glu  
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 785 790 795  
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 Phe Cys Asp Asp Gln Ser Pro Asp Ala Tyr Ser Ala Tyr Val Leu  
 815 820 825  
 Ala Ser Leu Ala Gly Glu Glu Leu Gln Ala Val Glu Ser Ser Pro  
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 Lys Phe Asn Pro Asn Ala Ile Gly Val Pro Gln Pro Tyr Leu Asn  
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 860 865 870  
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 875 880 885  
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 890 895 900  
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 Glu Asp Asp Pro Met Ser Trp Thr Glu Asp Tyr Leu Ala Trp Trp  
 935 940 945  
 Pro Lys Pro Met Glu Phe Arg Ala Cys Tyr Ile Lys Val Lys Ile

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Thr His Arg Arg Thr Val Gly Lys Leu Tyr Gly Ile Arg Asp Val		
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Arg Ser Thr Arg Asp Arg Asp Gln Pro Asn Val Ser Ala Ala Cys		
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Leu Glu Phe Lys Cys Ser Gly Met Leu Tyr Asp Gln Asp Arg Val		
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Asp Arg Thr Leu Val Lys Val Ile Pro Gln Gly Ser Cys Arg Arg		
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Ala Ser Val Asn Pro Met Leu His Glu Tyr Leu Val Asn His Leu		
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Pro Leu Ala Val Asn Asn Asp Thr Ser Glu Tyr Thr Met Leu Ala		
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Pro Leu Asp Pro Leu Gly His Asn Tyr Gly Ile Tyr Thr Val Thr		
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Asp Gln Asp Pro Arg Thr Ala Lys Glu Ile Ala Leu Gly Arg Cys		
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Phe Asp Gly Thr Ser Asp Gly Ser Ser Arg Ile Met Lys Ser Asn		
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Val Gly Val Ala Leu Thr Phe Asn Cys Val Glu Arg Gln Val Gly		
1115	1120	1125
Arg Gln Ser Ala Phe Gln Tyr Leu Gln Ser Thr Pro Ala Gln Ser		
1130	1135	1140
Pro Ala Ala Gly Thr Val Gln Gly Arg Val Pro Ser Arg Arg Gln		
1145	1150	1155
Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala		
1160	1165	1170
Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn		
1175	1180	

<210> 125

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

ctgggtgcctc aacagggagc ag 22

<210> 126  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 126  
ccatttgca ggtcaggta cag 23

<210> 127  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 127  
ctggagcaag tgctcagctg cctgtggta gactgggtc 40

<210> 128  
<211> 2819  
<212> DNA  
<213> Homo sapiens

<400> 128  
ctgcaagttt ttaacgccta acacacaagt atgttaggct tccaccaaag 50  
tcctcaatat acctgaatac gcacaatatac ttaactcttc atatttggtt 100  
ttgggatctg cttttaggtc ccatcttcat ttaaaaaaaaaa atacagagac 150  
ctacctaccc gtacgcatac atacatatgt gtatataat gtaaactaga 200  
caaagatcgc agatcataaa gcaagctctg cttagtttc caagaagatt 250  
acaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcatgccct 300  
ttgggttacg gtgtcctcag tgatgcagcc ctacccttg gtttgggac 350  
attatgattt gtgttaagact cagatttaca cgaaagaagg gaaagttgg 400  
gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450  
agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500  
tctgtcaat gggcaatccc tacatgtca ataatgagtg tgatgcgagt 550  
acccctgagc tggcacaccc ccctgagctg atgtttgatt ttgaaggaag 600  
acatccctcc acatttggc agtctgccac ttgaaaggag tatcccaagc 650  
ctctccaggt taacatcaact ctgtcttggta gcaaaaccat tgagctaaca 700  
gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750

Sequence Data

ggagaagtct ctcgattatg gacgaacatg gcagccctat cagtattatg 800  
ccacagactg cttagatgct tttcacatgg atcctaaatc cgtgaaggat 850  
ttatcacagc atacggtctt agaaatcatt tgacacagaag agtactcaac 900  
agggtataca acaaatacgca aaataatcca ctttgaatc aaagacaggt 950  
tcgcgcttt tgctggacct cgcc tacgca atatggcttc cctctacgga 1000  
cagctggata caaccaagaa actcagagat ttctttacag tcacagaccc 1050  
gaggataagg ctgttaagac cagccgttgg ggaaatattt gtagatgagc 1100  
tacacttggc acgctacttt tacgcgatct cagacataaa ggtgcgagga 1150  
aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200  
attgacatgc gaatgtgagc acaacactac aggtccagac tgtggaaat 1250  
gcaagaagaa ttatcagggc cgaccttgga gtccaggctc ctatctcccc 1300  
atccccaaag gcactgcaaa tacctgtatc cccagtattt ccagtattgg 1350  
tacgaatgtc tgcgacaacg agtcctgca ctgccagaac ggagggacgt 1400  
gccacaacaa cgtgcgctgc ctgtgcccgg ccgcatacac gggcatcctc 1450  
tgcgagaagc tgcggtgcga ggaggctggc agctgcggct ccgactctgg 1500  
ccagggcgcg ccccccgcacg gcaccccagc gctgctgctg ctgaccacgc 1550  
tgctggaaac cgccagcccc ctggtgttct aggtgtcacc tccagccaca 1600  
ccggacgggc ctgtgccgtg gggaaagcaga cacaacccaa acatttgcta 1650  
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acatccgagt caagactgtt aatttctgac tccagaggag ttggcagctg 1800  
ttgatattat cactgcaa at cacattgcca gctgcagagc atattgtga 1850  
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atcaaccgac ctaaaaacat tggctactct agcgtggtgc gccctagttac 1950  
gactccgccc agtgtgtgga ccaaccaa at agcattctt gctgtcaggt 2000  
gcattgtgg cataaggaaa tctgttacaa gctgccatat tggcctgctt 2050  
ccgtccctga atcccttcca acctgtgctt tagtgaacgt tgctctgtaa 2100  
ccctcggtgg ttgaaagatt tctttgtctg atgttagtga tgcacatgtg 2150  
taacagcccc ctctaaaagc gcaagccagt cataccctg tatatcttag 2200

cagcaactgag tccagtgcga gcacacaccc actataacaag agtggctata 2250  
ggaaaaaaaga aagtgtatct atcctttgtt attcaaatga agttattttt 2300  
cttgaactac tgtaatatgt agatTTTGT tattattgcc aatttgtgtt 2350  
accagacaat ctgttaatgt atctaattcg aatcagcaaa gactgacatt 2400  
ttatTTGTC ctcttcgtt ctgtttgtt tcactgtgca gagatttctc 2450  
tgtaaggcca acgaacgtgc tggcatcaaa gaatatcagt ttacatata 2500  
aacaagtgtt ataagattcc accaaaggac attctaaatg ttttcttgtt 2550  
gcttaaacac tggaagattt aaagaataaa aactcctgca taaacgattt 2600  
caggaatttg tattgcaatt tcttaagatg aaaggaacag ccaccaagca 2650  
gtttcacact cacttactg atttctgtgt ggactgagta cattcagctg 2700  
acgaatttag ttcccaggaa gatggattga tgttcaactg cttggacaac 2750  
ttctgcaaaa tatgagacta tttccacttg ggaaaaatta caacagcaaa 2800  
aaaaaaaaaaa aaaaaaaaaa 2819

<210> 129  
<211> 438  
<212> PRT  
<213> Homo sapiens

<400> 129  
Met Tyr Leu Ser Arg Ser Leu Ser Ile His Ala Leu Trp Val Thr 15  
1 5 10 15  
Val Ser Ser Val Met Gln Pro Tyr Pro Leu Val Trp Gly His Tyr .  
20 25 30  
Asp Leu Cys Lys Thr Gln Ile Tyr Thr Glu Glu Gly Lys Val Trp 45  
35 40 45  
Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr 60  
50 55 60  
Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro 75  
65 70 75  
Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn 90  
80 85 90  
Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu 105  
95 100 105  
Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser 120  
110 115 120  
Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr 135  
125 130 135

Leu Ser Trp Ser Lys Thr Ile Glu Leu Thr Asp Asn Ile Val Ile  
 140 145 150  
 Thr Phe Glu Ser Gly Arg Pro Asp Gln Met Ile Leu Glu Lys Ser  
 155 160 165  
 Leu Asp Tyr Gly Arg Thr Trp Gln Pro Tyr Gln Tyr Tyr Ala Thr  
 170 175 180  
 Asp Cys Leu Asp Ala Phe His Met Asp Pro Lys Ser Val Lys Asp  
 185 190 195  
 Leu Ser Gln His Thr Val Leu Glu Ile Ile Cys Thr Glu Glu Tyr  
 200 205 210  
 Ser Thr Gly Tyr Thr Thr Asn Ser Lys Ile Ile His Phe Glu Ile  
 215 220 225  
 Lys Asp Arg Phe Ala Leu Phe Ala Gly Pro Arg Leu Arg Asn Met  
 230 235 240  
 Ala Ser Leu Tyr Gly Gln Leu Asp Thr Thr Lys Lys Leu Arg Asp  
 245 250 255  
 Phe Phe Thr Val Thr Asp Leu Arg Ile Arg Leu Leu Arg Pro Ala  
 260 265 270  
 Val Gly Glu Ile Phe Val Asp Glu Leu His Leu Ala Arg Tyr Phe  
 275 280 285  
 Tyr Ala Ile Ser Asp Ile Lys Val Arg Gly Arg Cys Lys Cys Asn  
 290 295 300  
 Leu His Ala Thr Val Cys Val Tyr Asp Asn Ser Lys Leu Thr Cys  
 305 310 315  
 Glu Cys Glu His Asn Thr Thr Gly Pro Asp Cys Gly Lys Cys Lys  
 320 325 330  
 Lys Asn Tyr Gln Gly Arg Pro Trp Ser Pro Gly Ser Tyr Leu Pro  
 335 340 345  
 Ile Pro Lys Gly Thr Ala Asn Thr Cys Ile Pro Ser Ile Ser Ser  
 350 355 360  
 Ile Gly Thr Asn Val Cys Asp Asn Glu Leu Leu His Cys Gln Asn  
 365 370 375  
 Gly Gly Thr Cys His Asn Asn Val Arg Cys Leu Cys Pro Ala Ala  
 380 385 390  
 Tyr Thr Gly Ile Leu Cys Glu Lys Leu Arg Cys Glu Glu Ala Gly  
 395 400 405  
 Ser Cys Gly Ser Asp Ser Gly Gln Gly Ala Pro Pro His Gly Thr  
 410 415 420  
 Pro Ala Leu Leu Leu Leu Thr Thr Leu Leu Gly Thr Ala Ser Pro

425

430

435

Leu Val Phe

<210> 130  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe

<400> 130  
tcgattatgg acgaacatgg caggc 24

<210> 131  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 131  
ttctgagatc cctcatcctc 20

<210> 132  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 132  
agggtcaggc acagcaagtt tggg 24

<210> 133  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 133  
tttgctggac ctccggctacg gaattggctt ccctctacgg acagctggat 50

<210> 134  
<211> 1493  
<212> DNA  
<213> Homo sapiens

<400> 134  
cccacgcgtc cgggtgacct gggccgagcc ctccccgtcg gctaagattg 50  
ctgaggaggc ggcgggttagc tggcaggcgc cgacttccga aggccgccgt 100

ccgggcgagg tgtcctcatg acttctcttg tggaccatgt ccgtgatctt 150  
tttgcctgc gtggcacggg taagggatgg actgcccctc tcagcctcta 200  
ctgattttta ccacacccaa gatTTTTGG aatggaggag acggctcaag 250  
agtttagcct tgcgactggc ccagtatcca ggtcgagggtt ctgcagaagg 300  
ttgtgacttt agtatacatt tttcttctt cggggacgtg gcctgcatgg 350  
ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttcctggag 400  
accctgtggt gggaaattcac agttccat gacactacct gcattggcct 450  
agcctccagg ccatacgctt ttcttgagtt tgacagcatc attcagaaaag 500  
tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagctt 550  
aaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600  
ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650  
acttggagcc tgctcctaatttccgaatgg aaccagtgac agccctgggt 700  
atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750  
aggagttcac cttgcagaac attcttaca ggatccaagg agctggttct 800  
gctggttgga ccaaaccctcg tgagccagcc acccctgacc caaatgagga 850  
gagctctgat tctccatcc gggagcagtg atgtcaaact tctgctgctg 900  
gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaaat 950  
ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000  
gctgttgcac acaagcgcct tttatTTAGG gtAAAATTAA caaatccatt 1050  
ctattcctct gacccatgct tagtacatat gaccttaac cttacattt 1100  
atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150  
gatttgcattt cccaggattt tattttgttt aatgggcttt tctactaaaa 1200  
gcataaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250  
tattcgTTTT caataacttgc tgTTTcatgtt acacaagctt cttacggTTT 1300  
tcttgtaaca ataaatattt tgagtaaata atgggtacat ttAAACAAAC 1350  
tcagtagtac aacctaaact tgtataAAAG tgtgtAAAAA tgtatAGCCA 1400  
tttatATCCT atgtataAAAT taaatgaggt ggcttcagaa atggcagaat 1450  
aaatctaaag tgTTTattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135  
<211> 228

<212> PRT  
<213> Homo sapiens

<400> 135  
Met Ser Val Ile Phe Phe Ala Cys Val Val Arg Val Arg Asp Gly  
1 5 10 15  
  
Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe  
20 25 30  
  
Leu Glu Trp Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala  
35 40 45  
  
Gln Tyr Pro Gly Arg Gly Ser Ala Glu Gly Cys Asp Phe Ser Ile  
50 55 60  
  
His Phe Ser Ser Phe Gly Asp Val Ala Cys Met Ala Ile Cys Ser  
65 70 75  
  
Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu  
80 85 90  
  
Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu  
95 100 105  
  
Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln  
110 115 120  
  
Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu  
125 130 135  
  
Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro  
140 145 150  
  
Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met  
155 160 165  
  
Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg  
170 175 180  
  
Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn  
185 190 195  
  
Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala  
200 205 210  
  
Glu His Ser Leu Gln Asp Pro Arg Ser Trp Phe Cys Trp Leu Asp  
215 220 225  
  
Gln Thr Ser

<210> 136  
<211> 239  
<212> DNA  
<213> Homo sapiens

<220>

<221> unsure  
<222> 39, 61, 143, 209  
<223> unknown base

<400> 136  
tgcttcctgg agaccctgtg gtgggaattc acagettcnt atgacactac 50  
ctgcattggc ntagcctcca ggccatacgc ttttctttag tttgacagca 100  
tcattcagaa agtgaagtgg catttaact atgtaagttc ctntcagatg 150  
gagtgcgact tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200  
ggttctcant atggaggaca cagatgtggc aaatgggt 239

<210> 137  
<211> 2300  
<212> DNA  
<213> Homo sapiens

<400> 137  
ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50  
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100  
ccctttaaaaa cgaggcgggt ggtgcctgcc ccttaaggg cggggcgtcc 150  
ggacgactgt atctgagccc cagactgccc cgagttctg tcgcaggctg 200  
cgagggaaagg cccctaggct gggtctgggt gcttggcggc ggcggcttcc 250  
tccccgctcg tcctccccgg gcccagaggc acctcggctt cagtcatgct 300  
gagcagagta tggaagcacc tgactaccaa gtgttatccg tgcgagaaca 350  
gctattccac gagaggatcc gcgagtgat tatatcaaca cttctgttg 400  
caacactgta catcctctgc cacatctcc tgacccgctt caagaaggct 450  
gctgagttca ccacagtggta tcatgaagat gccaccgtca acaagattgc 500  
gctcgagctg tgcacctta ccctggcaat tgccctgggt gctgtctgc 550  
tcctgccctt ctccatcatc agcaatgagg tgctgctctc cctgcctcgg 600  
aactactaca tccagtggtt caacggctcc ctcatccatg gcctctggaa 650  
ccttgggtttt ctctccccca acctgtccct catttcctc atgccccttg 700  
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ctggggccggg tctatgagac agtgggtatg ttgatgctcc tcactctgct 800  
ggtgcttaggt atgggtgtggg tggcatcagc cattgtggac aagaacaagg 850  
ccaacagaga gtcactctat gactttggg agtactatct cccctacctc 900  
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950

actgggtctc gcccgcacgt tctccgtcac tgggaagctg ctagtcaagc 1000  
ccggcgtctt ggaagacactg gaggagcagc tgtactgctc agcctttgag 1050  
gaggcagccc tgaccgcag gatctgtaat cctacttcct gctggctgcc 1100  
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gctcattgtg gccatccaca tcctggagct gctcatcgat gaggctgcca 1300  
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tgtctcctgg tcctaagctc agcacttcct gtcttctctc gaaccctggg 1550  
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ggctacttgg acctcaggac ctggaaatctg agagggtggg tggcagaggg 1900  
gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950  
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gcctcaactgc tggtaatggc catccccata gccatgttta catgatttga 2100  
tgtgcaatag ggtgggttag gggcaggaa aggactggc cagggcaggg 2150  
tcgggagata gattgtctcc cttgcctctg gcccagcaga gcctaagcac 2200  
tgtgctatcc tggagggct ttggaccacc tgaaagacca aggggatagg 2250  
gaggaggagg cttagccat cagcaataaa gttgatccca gggaaaaaaaa 2300

<210> 138  
<211> 489  
<212> PRT  
<213> Homo sapiens

<400> 138

Met Glu Ala Pro Asp Tyr Glu Val Leu Ser Val Arg Glu Gln Leu  
1 5 10 15

Phe His Glu Arg Ile Arg Glu Cys Ile Ile Ser Thr Leu Leu Phe  
20 25 30

Ala Thr Leu Tyr Ile Leu Cys His Ile Phe Leu Thr Arg Phe Lys  
35 40 45

Lys Pro Ala Glu Phe Thr Thr Val Asp Asp Glu Asp Ala Thr Val  
50 55 60

Asn Lys Ile Ala Leu Glu Leu Cys Thr Phe Thr Leu Ala Ile Ala  
65 70 75

Leu Gly Ala Val Leu Leu Leu Pro Phe Ser Ile Ile Ser Asn Glu  
80 85 90

Val Leu Leu Ser Leu Pro Arg Asn Tyr Tyr Ile Gln Trp Leu Asn  
95 100 105

Gly Ser Leu Ile His Gly Leu Trp Asn Leu Val Phe Leu Phe Pro  
110 115 120

Asn Leu Ser Leu Ile Phe Leu Met Pro Phe Ala Tyr Phe Phe Thr  
125 130 135

Glu Ser Glu Gly Phe Ala Gly Ser Arg Lys Gly Val Leu Gly Arg  
140 145 150

Val Tyr Glu Thr Val Val Met Leu Met Leu Leu Thr Leu Leu Val  
155 160 165

Leu Gly Met Val Trp Val Ala Ser Ala Ile Val Asp Lys Asn Lys  
170 175 180

Ala Asn Arg Glu Ser Leu Tyr Asp Phe Trp Glu Tyr Tyr Leu Pro  
185 190 195

Tyr Leu Tyr Ser Cys Ile Ser Phe Leu Gly Val Leu Leu Leu Leu  
200 205 210

Val Cys Thr Pro Leu Gly Leu Ala Arg Met Phe Ser Val Thr Gly  
215 220 225

Lys Leu Leu Val Lys Pro Arg Leu Leu Glu Asp Leu Glu Glu Gln  
230 235 240

Leu Tyr Cys Ser Ala Phe Glu Glu Ala Ala Leu Thr Arg Arg Ile  
245 250 255

Cys Asn Pro Thr Ser Cys Trp Leu Pro Leu Asp Met Glu Leu Leu  
260 265 270

His Arg Gln Val Leu Ala Leu Gln Thr Gln Arg Val Leu Leu Glu  
275 280 285

Lys Arg Arg Lys Ala Ser Ala Trp Gln Arg Asn Leu Gly Tyr Pro  
 290 295 300  
 Leu Ala Met Leu Cys Leu Leu Val Leu Thr Gly Leu Ser Val Leu  
 305 310 315  
 Ile Val Ala Ile His Ile Leu Glu Leu Leu Ile Asp Glu Ala Ala  
 320 325 330  
 Met Pro Arg Gly Met Gln Gly Thr Ser Leu Gly Gln Val Ser Phe  
 335 340 345  
 Ser Lys Leu Gly Ser Phe Gly Ala Val Ile Gln Val Val Leu Ile  
 350 355 360  
 Phe Tyr Leu Met Val Ser Ser Val Val Gly Phe Tyr Ser Ser Pro  
 365 370 375  
 Leu Phe Arg Ser Leu Arg Pro Arg Trp His Asp Thr Ala Met Thr  
 380 385 390  
 Gln Ile Ile Gly Asn Cys Val Cys Leu Leu Val Leu Ser Ser Ala  
 395 400 405  
 Leu Pro Val Phe Ser Arg Thr Leu Gly Leu Thr Arg Phe Asp Leu  
 410 415 420  
 Leu Gly Asp Phe Gly Arg Phe Asn Trp Leu Gly Asn Phe Tyr Ile  
 425 430 435  
 Val Phe Leu Tyr Asn Ala Ala Phe Ala Gly Leu Thr Thr Leu Cys  
 440 445 450  
 Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg  
 455 460 465  
 Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro  
 470 475 480  
 Gln Ala Ser Arg Lys Thr Gln His Gln  
 485

<210> 139  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 53, 57  
 <223> unknown base

<400> 139  
 ggctgccgag ggaaggcccc ttgggttggt cttgggttgc tggcggcg 50  
 ggnttcntcc ccgctcgatcc tccccgggcc cagaggcacc tcggcttcag 100  
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150

gagaacagct attccacgag aggatccgcg agtgtattat atcaacactt 200  
ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250  
gaaggcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140  
<211> 526  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 197, 349  
<223> unknown base

<400> 140  
gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50  
aggcggtggt gcctgccctt taagggcggg gcgtccggac gactgtatct 100  
gagccccaga ctgccccgag tttctgtcgc aggctgcgag gaaaggcccc 150  
taggctgggt ctggtgcttg gcggcggcgg cttcctcccc gttgtcntcc 200  
ccgggccccag aggcacctcg gcttcagtc tgctgagcag agtatggaag 250  
cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300  
atccgcgagt gtattatac aacacttctg tttgcaacac tgtacatcnt 350  
ctgccacatc ttccctgaccc gcttcaagaa gcctgctgag ttcaccacag 400  
tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450  
tttaccctgg caattgccct gggtgctgtc ctgctcctgc ctttctccat 500  
catcagcaat gaggtgctgc actccc 526

<210> 141  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 141  
gactgtatct gagccccaga ctgc 24

<210> 142  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 142  
tcagcaatga ggtgctgctc 20

<210> 143  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 143  
tgaggaagat gagggacagg ttgg 24

<210> 144  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 144  
tatggaagca cctgactacg aagtgcatac cgtgcgagaa cagctattcc 50

<210> 145  
<211> 685  
<212> DNA  
<213> Homo sapiens

<400> 145  
gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50  
caaaccctgtt ttggaattga ggaaacttct ctttgatct cagcccttgg 100  
tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150  
gtcagtggac agtttgcaag gacacccagg cccattattt tcctccagcc 200  
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250  
gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacatt 300  
ggaaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350  
atctggagag tacagatgcc aggcccaggg ctccccatc agtagccctg 400  
tgcacttggaa ttttcttca gagatggat ttccatgc tgcccaggct 450  
aatgttgaac tcctgggctc aagtgtatcg ctcacctagg cctctcaaag 500  
cgctgggatt acagttcgc tgatcctgca agctccactt tctgtgttg 550  
aaggagactc tgtggttctg aggtgccgg caaaggcgg a gtaaacactg 600  
aataatacta tttacaagaa tgataatgtc ctggcattcc ttaataaaag 650  
aactgacttc caaaaaaaaaaaaaaaa aaaaaaaa 685

<210> 146  
<211> 124  
<212> PRT  
<213> Homo sapiens

<400> 146  
Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly  
1 5 10 15  
  
Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro  
20 25 30  
  
Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys  
35 40 45  
  
Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg  
50 55 60  
  
Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu  
65 70 75  
  
Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser  
80 85 90  
  
Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly  
95 100 105  
  
Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser  
110 115 120  
  
Asp Leu Leu Thr

<210> 147  
<211> 1621  
<212> DNA  
<213> Homo sapiens

<400> 147  
cagaagagg ggcttagctag ctgtctctgc ggaccaggga gaccccccgcg 50  
cccccccggt gtgaggcggc ctcacaggc cgggtggct ggcgagccga 100  
cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150  
gaggaaccat ggctccgcag aacctgagca cctttgcct gttgctgcta 200  
tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250  
ggtgccctcga agtgcctcta taaaggatat taaaaaggcc tatagaaaac 300  
tagccctgca gtttcatccc gaccggaacc ctgatgatcc acaagcccag 350  
gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400  
gaaacggaaa cagtacgata cttatggta agaaggatta aaagatggtc 450  
atcagagctc ccatggagac atttttcac acttcttgg ggatttttgt 500

ttcatgttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550  
aagtgatatt attgttagatc tagaagtcac tttggaagaa gtatatgcag 600  
gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650  
ggcaaacgga agtgcattg tcggcaagag atgcggacca cccagctggg 700  
ccctggcgcc ttccaaatga cccaggaggt ggtctgcac gaatgcccta 750  
atgtcaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800  
ggggtgagag acggcatgga gtacccctt attggagaag gtgagcctca 850  
cgtggatggg gaggctggag atttacggtt ccgaatcaaa gttgtcaagc 900  
acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950  
tcattagttt agtcactggt tggcttgag atggatatta ctcacttgg 1000  
tggtcacaag gtacatattt cccggataa gatcaccagg ccaggagcga 1050  
agctatggaa gaaagggaa gggctccccca actttgacaa caacaatatc 1100  
aagggctctt tgataatcac ttttcatgtg gattttccaa aagaacagtt 1150  
aacagaggaa gcgagagaag gatatcaaca gctactgaaa caagggtcag 1200  
tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattt 1250  
gactttgtt aaaataagtg aataagcgat atttattatc tgcaaggattt 1300  
ttttgtgtt gttttgttt ttatttcaa tatgcaagtt aggcttaatt 1350  
tttttatcta atgatcatca tgaaatgaat aagaggctt aagaatttgt 1400  
ccatttgcatt tcggaaaaga atgaccagca aaaggtttac taataccct 1450  
ccctttgggg atttaatgtc tggtgctgcc gcctgagttt caagaattaa 1500  
agctgcaaga ggactccagg agaaaaagaa acacaatata gagggttgga 1550  
gttggtagca atttcattca aaatgccaac tggagaagtc tgttttaaa 1600  
tacattttgt tgttatTTT a 1621

<210> 148  
<211> 358  
<212> PRT  
<213> Homo sapiens

<400> 148  
Met Ala Pro Gln Asn Leu Ser Thr Phe Cys Leu Leu Leu Tyr  
1 5 10 15  
Leu Ile Gly Ala Val Ile Ala Gly Arg Asp Phe Tyr Lys Ile Leu  
20 25 30

Gly Val Pro Arg Ser Ala Ser Ile Lys Asp Ile Lys Lys Ala Tyr  
                   35                  40                  45  
 Arg Lys Leu Ala Leu Gln Leu His Pro Asp Arg Asn Pro Asp Asp  
                   50                  55                  60  
 Pro Gln Ala Gln Glu Lys Phe Gln Asp Leu Gly Ala Ala Tyr Glu  
                   65                  70                  75  
 Val Leu Ser Asp Ser Glu Lys Arg Lys Gln Tyr Asp Thr Tyr Gly  
                   80                  85                  90  
 Glu Glu Gly Leu Lys Asp Gly His Gln Ser Ser His Gly Asp Ile  
                   95                  100                  105  
 Phe Ser His Phe Phe Gly Asp Phe Gly Phe Met Phe Gly Gly Thr  
                   110                  115                  120  
 Pro Arg Gln Gln Asp Arg Asn Ile Pro Arg Gly Ser Asp Ile Ile  
                   125                  130                  135  
 Val Asp Leu Glu Val Thr Leu Glu Glu Val Tyr Ala Gly Asn Phe  
                   140                  145                  150  
 Val Glu Val Val Arg Asn Lys Pro Val Ala Arg Gln Ala Pro Gly  
                   155                  160                  165  
 Lys Arg Lys Cys Asn Cys Arg Gln Glu Met Arg Thr Thr Gln Leu  
                   170                  175                  180  
 Gly Pro Gly Arg Phe Gln Met Thr Gln Glu Val Val Cys Asp Glu  
                   185                  190                  195  
 Cys Pro Asn Val Lys Leu Val Asn Glu Glu Arg Thr Leu Glu Val  
                   200                  205                  210  
 Glu Ile Glu Pro Gly Val Arg Asp Gly Met Glu Tyr Pro Phe Ile  
                   215                  220                  225  
 Gly Glu Gly Glu Pro His Val Asp Gly Glu Pro Gly Asp Leu Arg  
                   230                  235                  240  
 Phe Arg Ile Lys Val Val Lys His Pro Ile Phe Glu Arg Arg Gly  
                   245                  250                  255  
 Asp Asp Leu Tyr Thr Asn Val Thr Ile Ser Leu Val Glu Ser Leu  
                   260                  265                  270  
 Val Gly Phe Glu Met Asp Ile Thr His Leu Asp Gly His Lys Val  
                   275                  280                  285  
 His Ile Ser Arg Asp Lys Ile Thr Arg Pro Gly Ala Lys Leu Trp  
                   290                  295                  300  
 Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys  
                   305                  310                  315  
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln

320                    325                    330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln  
335                    340                    345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr  
350                    355

<210> 149  
<211> 509  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,  
482  
<223> unknown base

<400> 149  
tgggaccagg gaaccccgaa ccccccgggtg gagngcctaa caggccggtg 50  
gntgcgaccg aagcggcgaa cggaggaggt tttgaggatt tttggAACAG 100  
gaccggaca gaggaaccat ggTTCCGCAg aacntgagca cNTTTCGCT 150  
gttGNTGNTA tacttcatcg gggcgggtat tgccggacga gattttata 200  
agattttggg gtgcctngaa gtgcctnta taaaggatata taaaaaggcc 250  
tatAGGAAAC tagccctgca gntttatccc gaccggAAAC ctgatgatcc 300  
acaAGCCCAG gagaaattcc aggattttggg tgctgcttat gaggttntgt 350  
cagatagtga gaaacggaaa cagtacgata attatggta agaaggatta 400  
aaAGATGGTN atcagagctc ccatggagac atttttcac acttnTTGG 450  
ggatttttgtt ttcatgtttg gaggaacccc tngtcagcaa gacagaaata 500  
ttccaagag 509

<210> 150  
<211> 1532  
<212> DNA  
<213> Homo sapiens

<400> 150  
ggcacgaggc ggcggggcag tcgcgggatg cgccccggag ccacagcctg 50  
aggcccttag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100  
ctcttccccca atttGCCACT tccagcagct ttagccatg aggaggatgt 150  
gaccgggact gagtcaggag ccctctggaa gcatggagac tgtgggtatt 200  
gttgcctatag gtgtcgtggc caccatctt ctggcttcgt ttgcagcctt 250

ggtgctggtt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300  
gctatgattc taagccatt gtggaccta ttgggtccat ggagaccagg 350  
tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccc 400  
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcggtc 450  
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500  
aagcttggtg ccatgacaat gggctctggg gccaagatga agacttcagc 550  
cagtgtcagc gacatcattg tggtgccaa gcggatcagc cccaggggtgg 600  
atgatgttgt gaagtcgatg taccctccgt tggaccccaa actcctggac 650  
gcacggacga ctgcctgct cctgtctgtc agtcacctgg tgctgggtac 700  
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750  
tgtcggtgc tgaggagcat ttggaaagtcc ttcgagaagc agccctagct 800  
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850  
gtctgcaatt tagtgcctac aggccagcag ctagccatga aggcccctgc 900  
cgccatccct ggatggctca gcttagcctt ctacttttc ctatagagtt 950  
agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000  
gagatccccg tcagttatg cctctttgc agtgcaaac tgtggctggt 1050  
gagtggcagt ctaatactac agtttagggga gatgccattc actctctgca 1100  
agaggagtagt tgaaaactgg tggactgtca gctttattta gctcacctag 1150  
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200  
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250  
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300  
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350  
tgtattatct gcctggtccc tgaggcgctc gggctctcc tctcccttgc 1400  
aggtttgggt ttgaagctga ggaactacaa agttgatgat ttcttttta 1450  
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atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151  
<211> 226  
<212> PRT  
<213> Homo sapiens

<400> 151

Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile  
 1 5 10 15  
 Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg  
 20 25 30  
 Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro  
 35 40 45  
 Ile Val Asp Leu Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser  
 50 55 60  
 Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu  
 65 70 75  
 Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu  
 80 85 90  
 Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr  
 95 100 105  
 Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys  
 110 115 120  
 Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile  
 125 130 135  
 Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu  
 140 145 150  
 Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser  
 155 160 165  
 Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr  
 170 175 180  
 Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu  
 185 190 195  
 His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp  
 200 205 210  
 Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala  
 215 220 225

Ile

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<210> 152
<211> 1027
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1017, 1020
<223> unknown base
  
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<400> 152  
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tcggcgctgt ccccaccact gcagccatga tctccttaac ggacacgcag 100  
aaaattggaa tgggattaac aggatttggaa gtgttttcc ttgttttgg 150  
aatgattctc tttttgaca aagcactact ggctatttggaa aatgttttat 200  
tttagccgg ctggctttt gtaatttgggtt tagaaagaac attcagattc 250  
ttcttccaaa aacataaaat gaaagctaca ggttttttc tgggtgggt 300  
atttgtatc cttatttgggtt ggcctttgtat aggcattgtat ttcttgggtt 350  
atggattttt tctcttggttt aggggcttctt ttccctgtat ttgtttttt 400  
attagaagag tgccagtccct tggatccctc ctaaatttac ctggaaattt 450  
atcatttgta gataaagttt gagaaagcaa caatatggta taacaacaag 500  
tgaatttggaa gactcattta aaatatttggaa ttatttataa agtcatttga 550  
agaatattca gcacaaaattt aaattacatg aaatagcttggaa atgtttttt 600  
tacaggagtt taaaacgtat agcctacaaa gtaccaggcgg caaatttgc 650  
aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700  
caagcaaact gagagaggtt gaaatccatgt taatgtatgtt taagaaactc 750  
ttgaaggcta tttgtgttgtt tttccacaa tgtgcgaaac tcagccatcc 800  
tttagagaact gtgggtgcctg tttctttctt ttttatttttggaa aaggctcagg 850  
agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900  
tatttccagt tgcactgtat ctcttggaaat gatgtatgtt ttcgatttggaa 950  
ttgtgtcatt ttaaagtattt aaaacccaagg aaaccccaat tttgatgtat 1000  
ggattactt ttttgngcn cagggcc 1027

<210> 153  
<211> 138  
<212> PRT  
<213> Homo sapiens

<220>  
<221> N-myristoylation Sites  
<222> 11-16, 51-56 and 116-121  
<223> N-myristoylation Sites.

<220>  
<221> Transmembrane domains  
<222> 12-30, 33-52, 69-89 and 93-109  
<223> Transmembrane domains

<220>  
<221> Aminoacyl-transfer RNA Synthetases.  
<222> 49-59  
<223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153  
Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr  
1 5 10 15  
  
Gly Phe Gly Val Phe Phe Leu Phe Gly Met Ile Leu Phe Phe  
20 25 30  
  
Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly  
35 40 45  
  
Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe  
50 55 60  
  
Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val  
65 70 75  
  
Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu  
80 85 90  
  
Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val  
95 100 105  
  
Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn  
110 115 120  
  
Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn  
125 130 135  
  
Asn Met Val

<210> 154  
<211> 405  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 66  
<223> unknown base

<400> 154  
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actcagcttc ccaccntggg ctttccgagg tgcttcgccc gctgtcccc 100  
ccactgcagc catgatctcc ttaacggaca cgcaaaaaat tggaatggga 150  
ttaaccggat ttggagtgtt tttcctgttc tttgaaatga ttctctttt 200  
tgacaaagca ctactggcta ttggaaatgt tttatttata gccggcttgg 250  
cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300

aaaatgaaag ctacagggtt tttctgggt ggtgtattt tagtccttat 350  
tggttggcct ttgataggca tgatcttcga aatttatgga tttttctct 400  
tgttc 405  
<210> 155  
<211> 1781  
<212> DNA  
<213> Homo sapiens  
<400> 155  
ggcacgaggc tgaacccagc cggctccatc tcagcttctg gtttctaagt 50  
ccatgtgccca aaggctgcca ggaaggagac gccttcctga gtcctggatc 100  
tttcttcctt ctggaaatct ttgactgtgg gtagttattt atttctgaat 150  
aagagcgtcc acgcatcatg gacctcgccg gactgctgaa gtctcagttc 200  
ctgtgccacc tggtcttctg ctacgtctt attgcctcag ggctaattcat 250  
caacaccatt cagctttca ctctcctcct ctggcccatt aacaaggcagc 300  
tcttccggaa gatcaactgc agactgtcct attgcatttc aagccagctg 350  
gtgatgctgc tggagtggtg gtcgggcacg gaatgcacca tcttcacgga 400  
cccgcgccgccc tacctaagt atgggaagga aaatgcacatc gtggttctca 450  
accacaagtt taaaaatttac tttctgtgtg gctggagct gtccgaacgc 500  
tttgggctgt tagggggctc caaggtccctg gccaaagaaag agctggccta 550  
tgtcccaatt atcggtcttca tgggtactt caccgagatg gtcttctgtt 600  
cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650  
ctccggact accccgagaa gtatTTTTC ctgattcaact gtgagggcac 700  
acggttcacg gagaagaagc atgagatcag catgcaggtg gcccggcca 750  
aggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggcttc 800  
gccatcaccg tgaggagctt gagaaatgta gttcagctg tatatgactg 850  
tacactcaat ttcaaaaaata atgaaaatcc aacactgctg ggagtccaa 900  
acggaaagaa ataccatgca gatttgtatg ttaggaggat cccactggaa 950  
gacatccctg aagacgatga cgagtgcctg gcctggctgc acaagctcta 1000  
ccaggagaag gatgccttcc aggaggagta ctacaggacg ggcacccctcc 1050  
cagagacgcc catggtgccc cccccggccgc cctggaccct cgtgaactgg 1100  
ctgttttggg cctcgctggt gctctaccct ttcttccagt tcctggtcag 1150

catgatcagg agcgggtctt ccctgacgct ggccagcttc atcctcgct 1200  
tctttgtggc ctccgtggga gttcgatgga tgattggtgt gacggaaatt 1250  
gacaaggggct ctgcctacgg caactctgac agcaagcaga aactgaatga 1300  
ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtgg 1350  
cctctgcata tcctccttag tgggacacgg tgacaaaggc tgggtgagcc 1400  
cctgctgggc acggcggaaag tcacgacctc tccagccagg gagtctggtc 1450  
tcaaggccgg atggggagga agatgtttt taatctttt ttccccatgt 1500  
gcttagtgg gcttggttt tcttttgtg cgagtgtgtg tgagaatggc 1550  
tgtgtggta gtgtgaactt tttctgtga tcatagaaag ggtattttag 1600  
gctgcagggg agggcagggc tggggaccga aggggacaag ttccccttc 1650  
atccttggt gctgagttt ctgttaaccct tgggtgccag agataaagt 1700  
aaaagtgc ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378

<212> PRT

<213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu
1					5					10				15

Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr
				20					25					30

Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
					35				40					45

Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
					50				55					60

Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
					65				70					75

Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala
					80				85					90

Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly
						95			100					105

Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val
					110				115					120

Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met
					125				130					135

Trp Tyr Phe Thr Glu Met Val Phe Cys Ser Arg Lys Trp Glu Gln  
                  140                     145                 150  
 Asp Arg Lys Thr Val Ala Thr Ser Leu Gln His Leu Arg Asp Tyr  
                  155                     160                 165  
 Pro Glu Lys Tyr Phe Phe Leu Ile His Cys Glu Gly Thr Arg Phe  
                  170                     175                 180  
 Thr Glu Lys Lys His Glu Ile Ser Met Gln Val Ala Arg Ala Lys  
                  185                     190                 195  
 Gly Leu Pro Arg Leu Lys His His Leu Leu Pro Arg Thr Lys Gly  
                  200                     205                 210  
 Phe Ala Ile Thr Val Arg Ser Leu Arg Asn Val Val Ser Ala Val  
                  215                     220                 225  
 Tyr Asp Cys Thr Leu Asn Phe Arg Asn Asn Glu Asn Pro Thr Leu  
                  230                     235                 240  
 Leu Gly Val Leu Asn Gly Lys Tyr His Ala Asp Leu Tyr Val  
                  245                     250                 255  
 Arg Arg Ile Pro Leu Glu Asp Ile Pro Glu Asp Asp Asp Glu Cys  
                  260                     265                 270  
 Ser Ala Trp Leu His Lys Leu Tyr Gln Glu Lys Asp Ala Phe Gln  
                  275                     280                 285  
 Glu Glu Tyr Tyr Arg Thr Gly Thr Phe Pro Glu Thr Pro Met Val  
                  290                     295                 300  
 Pro Pro Arg Arg Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala  
                  305                     310                 315  
 Ser Leu Val Leu Tyr Pro Phe Phe Gln Phe Leu Val Ser Met Ile  
                  320                     325                 330  
 Arg Ser Gly Ser Ser Leu Thr Leu Ala Ser Phe Ile Leu Val Phe  
                  335                     340                 345  
 Phe Val Ala Ser Val Gly Val Arg Trp Met Ile Gly Val Thr Glu  
                  350                     355                 360  
 Ile Asp Lys Gly Ser Ala Tyr Gly Asn Ser Asp Ser Lys Gln Lys  
                  365                     370                 375  
 Leu Asn Asp

<210> 157  
 <211> 1849  
 <212> DNA  
 <213> Homo sapiens

<400> 157  
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acggaagggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150  
tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200  
agaaaatatac tccatgctat cagctttta gctttataa ttcttcaggc 250  
gaagtaaatg agcaagcact gaagaaaata ttatcaaattg tcaaaaagaa 300  
tgtggtaggt tggtacaaat tccgtcgtca ttcagatcag atcatgacgt 350  
tttagagagag gctgottcac aaaaacttgc aggagcattt ttcaaaccua 400  
gaccttggtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450  
tactcatcga ctggaacatt ccttatataa acctaaaaa ggacttttc 500  
acagggtacc ttttagtggtt gccaatctgg gcatgtctga acaactgggt 550  
tataaaaactg tatcaggttc ctgtatgtcc actggttta gccgagcagt 600  
acaaaacacac agctctaaat ttttgaaga agatggatcc ttaaaggagg 650  
tacataagat aaatgaaaatg tatgcttcat tacaagagga attaaagagt 700  
atatgcaaaa aagtggaaga cagtgaacaa gcagtagata aactagtaaa 750  
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cacactgaca ttcctgaagc tagtccagct agtacaccac aaatcattaa 1050  
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tgtagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150  
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aaagatgaag gttttgggt aatattcag gtctcctaca ttttgatcct 1250  
tttaacctta caaggagatt ttttatttg gctgatgggt aaagccaaac 1300  
atttctattt ttttactat gttgagctac ttgcagtaag ttcatgtgtt 1350  
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tgaaaattta tctgagtcat taaaattctc cttaagtgtat acttttttag 1750  
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aaatttgc当地 aacatcatct aaaatttaaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met	Glu	Gly	Glu	Ser	Thr	Ser	Ala	Val	Leu	Ser	Gly	Phe	Val	Leu	15
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Gly	Ala	Leu	Ala	Phe	Gln	His	Leu	Asn	Thr	Asp	Ser	Asp	Thr	Glu	30
Gly	Phe	Leu	Leu	Gly	Glu	Val	Lys	Gly	Glu	Ala	Lys	Asn	Ser	Ile	45
Thr	Asp	Ser	Gln	Met	Asp	Asp	Val	Glu	Val	Val	Tyr	Thr	Ile	Asp	60
Ile	Gln	Lys	Tyr	Ile	Pro	Cys	Tyr	Gln	Leu	Phe	Ser	Phe	Tyr	Asn	75
Ser	Ser	Gly	Glu	Val	Asn	Glu	Gln	Ala	Leu	Lys	Lys	Ile	Leu	Ser	90
Asn	Val	Lys	Asn	Val	Val	Gly	Trp	Tyr	Lys	Phe	Arg	Arg	His		
Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	120
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	135
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	150
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	165
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	180
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	195
185									190						

Gln Thr His Ser Ser Lys Phe Phe Glu Glu Asp Gly Ser Leu Lys  
 200 205 210  
 Glu Val His Lys Ile Asn Glu Met Tyr Ala Ser Leu Gln Glu Glu  
 215 220 225  
 Leu Lys Ser Ile Cys Lys Lys Val Glu Asp Ser Glu Gln Ala Val  
 230 235 240  
 Asp Lys Leu Val Lys Asp Val Asn Arg Leu Lys Arg Glu Ile Glu  
 245 250 255  
 Lys Arg Arg Gly Ala Gln Ile Gln Ala Ala Arg Glu Lys Asn Ile  
 260 265 270  
 Gln Lys Asp Pro Gln Glu Asn Ile Phe Leu Cys Gln Ala Leu Arg  
 275 280 285  
 Thr Phe Phe Pro Asn Ser Glu Phe Leu His Ser Cys Val Met Ser  
 290 295 300  
 Leu Lys Asn Arg His Val Ser Lys Ser Ser Cys Asn Tyr Asn His  
 305 310 315  
 His Leu Asp Val Val Asp Asn Leu Thr Leu Met Val Glu His Thr  
 320 325 330  
 Asp Ile Pro Glu Ala Ser Pro Ala Ser Thr Pro Gln Ile Ile Lys  
 335 340 345  
 His Lys Ala Leu Asp Leu Asp Asp Arg Trp Gln Phe Lys Arg Ser  
 350 355 360  
 Arg Leu Leu Asp Thr Gln Asp Lys Arg Ser Lys Ala Asn Thr Gly  
 365 370 375  
 Ser Ser Asn Gln Asp Lys Ala Ser Lys Met Ser Ser Pro Glu Thr  
 380 385 390  
 Asp Glu Glu Ile Glu Lys Met Lys Gly Phe Gly Glu Tyr Ser Arg  
 395 400 405  
 Ser Pro Thr Phe

<210> 159  
 <211> 2651  
 <212> DNA  
 <213> Homo sapiens

<400> 159  
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 acgagcggac cagcgcaggc cagcccaagc agcgccgac gaacgcccgc 100  
 cggccggccac accctctgcg gtccccgcgg cgccctgccac cttccctcc 150  
 ttccccgcgt ccccgccctcg ccggccagtc agcttgcggg gttcgctgcc 200

ccgcgaaacc ccgaggtcac cagcccgcbc ctctgcttcc ctggggccgc 250  
cgcgcctcc acgccttcct tctccctgg cccggcgcct ggcaccgggg 300  
accgttgctt gacgcgaggc ccagctctac ttttcgcccc gcgtctctc 350  
cgccctgctcg cctcttccac caactccaac tccttctccc tccagctcca 400  
ctcgctagtc cccgactccg ccagccctcg gccgcgtgcc gtagcgccgc 450  
ttcccggtccg gtcccaaagg tgggaacgcg tccgccccgg cccgcaccat 500  
ggcacggttc ggcttgcgg cgcttctctg caccctggca gtgctcagcg 550  
ccgcgctgct ggctgccgag ctcaagtgcga aaagttgtc ggaagtgcga 600  
cgtcttacg tgtccaaagg cttcaacaag aacgatgccc ccctccacga 650  
gatcaacggt gatcattga agatctgtcc ccagggttct acctgctgct 700  
ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750  
agtgtggtca gcgaacagtg caatcatgg caagctgtct ttgcttcacg 800  
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aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900  
aattctgagc tatttaaaga tctcttcgta gagttgaaac gttactacgt 950  
ggtggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000  
tcctggagcg gatgttccgc ctggtaact cccagttacca ctttacagat 1050  
gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100  
agatgtccct cgcaaattga agctccaggt tactcgtgct tttgttagcag 1150  
cccgtaactt cgctcaaggc ttagcggttgc cggagatgt cgtgagcaag 1200  
gtctccgtgg taaaacccac agcccagtgt acccatgccc tggtaagat 1250  
gatctactgc tcccactgcc ggggtctcgta gactgtgaag ccatgttaca 1300  
actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350  
gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400  
gctagaggtt ccttcaaca ttgaatcggt catggatccc atcgatgtga 1450  
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cagaaggttt tccagggatg tggacccccc aagccctcc cagctggacg 1550  
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ctcccttccg agcaacgttt gcaacgatga gaggatggct gcagggaaacg 1750  
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ggttgacacc agcaaaccag acatactgat cttcgtaa atcatggctc 1900  
ttcgagtgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950  
gacttcttg atatcagtga tgaaagttagt ggagaaggaa gtggaagtgg 2000  
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ggggcacagg cctacccct cactgtcttc tgcattttgt tcctggttat 2150  
gcagagagag tggagataat tctcaaactc tgaaaaaaag tgttcatcaa 2200  
aaagttaaaa ggcaccagtt atcaacttcc taccatccta gtgactttgc 2250  
tttttaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300  
tttaagaagt gctgactttg ttttctcatt cagtttggg aggaaaagg 2350  
actgtgcatt gagttggcct ctgctcccc aaaccatgtt aaacgtggct 2400  
aacagtgttag gtacagaact atagtttagt gtgcatttg gattttatca 2450  
ctctattatt tgtttgtatg tttttctc atttcgtttg tgggttttt 2500  
tttccaaactg tgatctcgcc ttgtttctta caagcaaacc agggccctt 2550  
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agcaggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650

c 2651

<210> 160  
<211> 556  
<212> PRT  
<213> Homo sapiens

<400> 160  
Met Ala Arg Phe Gly Leu Pro Ala Leu Leu Cys Thr Leu Ala Val  
1 5 10 15  
Leu Ser Ala Ala Leu Leu Ala Ala Glu Leu Lys Ser Lys Ser Cys  
20 25 30  
Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn  
35 40 45  
Asp Ala Pro Leu His Glu Ile Asn Gly Asp His Leu Lys Ile Cys

50	55	60
Pro Gln Gly Ser Thr Cys Cys Ser Gln Glu Met Glu Glu Lys Tyr		
65	70	75
Ser Leu Gln Ser Lys Asp Asp Phe Lys Ser Val Val Ser Glu Gln		
80	85	90
Cys Asn His Leu Gln Ala Val Phe Ala Ser Arg Tyr Lys Lys Phe		
95	100	105
Asp Glu Phe Phe Lys Glu Leu Leu Glu Asn Ala Glu Lys Ser Leu		
110	115	120
Asn Asp Met Phe Val Lys Thr Tyr Gly His Leu Tyr Met Gln Asn		
125	130	135
Ser Glu Leu Phe Lys Asp Leu Phe Val Glu Leu Lys Arg Tyr Tyr		
140	145	150
Val Val Gly Asn Val Asn Leu Glu Glu Met Leu Asn Asp Phe Trp		
155	160	165
Ala Arg Leu Leu Glu Arg Met Phe Arg Leu Val Asn Ser Gln Tyr		
170	175	180
His Phe Thr Asp Glu Tyr Leu Glu Cys Val Ser Lys Tyr Thr Glu		
185	190	195
Gln Leu Lys Pro Phe Gly Asp Val Pro Arg Lys Leu Lys Leu Gln		
200	205	210
Val Thr Arg Ala Phe Val Ala Ala Arg Thr Phe Ala Gln Gly Leu		
215	220	225
Ala Val Ala Gly Asp Val Val Ser Lys Val Ser Val Val Asn Pro		
230	235	240
Thr Ala Gln Cys Thr His Ala Leu Leu Lys Met Ile Tyr Cys Ser		
245	250	255
His Cys Arg Gly Leu Val Thr Val Lys Pro Cys Tyr Asn Tyr Cys		
260	265	270
Ser Asn Ile Met Arg Gly Cys Leu Ala Asn Gln Gly Asp Leu Asp		
275	280	285
Phe Glu Trp Asn Asn Phe Ile Asp Ala Met Leu Met Val Ala Glu		
290	295	300
Arg Leu Glu Gly Pro Phe Asn Ile Glu Ser Val Met Asp Pro Ile		
305	310	315
Asp Val Lys Ile Ser Asp Ala Ile Met Asn Met Gln Asp Asn Ser		
320	325	330
Val Gln Val Ser Gln Lys Val Phe Gln Gly Cys Gly Pro Pro Lys		
335	340	345

Pro Leu Pro Ala Gly Arg Ile Ser Arg Ser Ile Ser Glu Ser Ala  
350 355 360  
Phe Ser Ala Arg Phe Arg Pro His His Pro Glu Glu Arg Pro Thr  
365 370 375  
Thr Ala Ala Gly Thr Ser Leu Asp Arg Leu Val Thr Asp Val Lys  
380 385 390  
Glu Lys Leu Lys Gln Ala Lys Lys Phe Trp Ser Ser Leu Pro Ser  
395 400 405  
Asn Val Cys Asn Asp Glu Arg Met Ala Ala Gly Asn Gly Asn Glu  
410 415 420  
Asp Asp Cys Trp Asn Gly Lys Gly Lys Ser Arg Tyr Leu Phe Ala  
425 430 435  
Val Thr Gly Asn Gly Leu Ala Asn Gln Gly Asn Asn Pro Glu Val  
440 445 450  
Gln Val Asp Thr Ser Lys Pro Asp Ile Leu Ile Leu Arg Gln Ile  
455 460 465  
Met Ala Leu Arg Val Met Thr Ser Lys Met Lys Asn Ala Tyr Asn  
470 475 480  
Gly Asn Asp Val Asp Phe Phe Asp Ile Ser Asp Glu Ser Ser Gly  
485 490 495  
Glu Gly Ser Gly Ser Gly Cys Glu Tyr Gln Gln Cys Pro Ser Glu  
500 505 510  
Phe Asp Tyr Asn Ala Thr Asp His Ala Gly Lys Ser Ala Asn Glu  
515 520 525  
Lys Ala Asp Ser Ala Gly Val Arg Pro Gly Ala Gln Ala Tyr Leu  
530 535 540  
Leu Thr Val Phe Cys Ile Leu Phe Leu Val Met Gln Arg Glu Trp  
545 550 555

Arg

<210> 161  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 161  
ctccgtggta aaccccacag ccc 23

<210> 162  
<211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 162  
tcacatcgat gggatccatg accg 24

<210> 163  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 163  
ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164  
<211> 870  
<212> DNA  
<213> Homo sapiens

<400> 164  
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gctgagtatc ctgacacctgag tcatacccccggatcaggag cctccagcag 100  
ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150  
cgatgaaagt tctaatactct tccctcctcc tgttgctgcc actaatgctg 200  
atgtccatgg tctcttagcag cctgaatcca ggggtcgcca gaggccacag 250  
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300  
gtgagtgcaa agattggttc ctgagagccc cgagaagaaa attcatgaca 350  
gtgtctggc tgccaaagaa gcagtgcctt tgtgatcatt tcaagggcaa 400  
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450  
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagcttgct 500  
ctgcctttgt aggagctctg agcgccccact cttccaatta aacattctca 550  
gccaaagaaga cagtgagcac acctaccaga cactttctt ctcccacctc 600  
actctccac tgtacccacc cctaaatcat tccagtgctc tcaaaaagca 650  
tgttttcaa gatcatttg tttgttgctc tctctagtgt cttcttctct 700  
cgtcagtctt agcctgtgcc ctccccttac ccaggcttag gcttaattac 750  
ctgaaagatt ccagggaaact gtagcttcct agctagtgtc atttaacctt 800

aaatgcaatc aggaaagtag caaacagaag tcaataaata tttttaaatg 850  
tcaaaaaaaaaaaa aaaaaaaaaaa 870

<210> 165  
<211> 119  
<212> PRT  
<213> Homo sapiens

<400> 165  
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met  
1 5 10 15  
Leu Met Ser Met Val Ser Ser Leu Asn Pro Gly Val Ala Arg  
20 25 30  
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu  
35 40 45  
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro  
50 55 60  
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys  
65 70 75  
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln  
80 85 90  
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln  
95 100 105  
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu  
110 115

<210> 166  
<211> 551  
<212> DNA  
<213> Homo sapiens

<400> 166  
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tattcctgac ctgctatgca gacgacaac cagacaagcc agacgacaag 100  
ccagacgact cgggcaaaga cccaaagcca gacttccccca aattcctaag 150  
cctcctggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200  
ccatgtccag gagcacagga tttatgaaat ttgatgataa tgaaggaaaa 250  
cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300  
tccaagagca gccaaatcct gctttccag tttggctcca caagtccctcc 350  
aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400  
tggcttcaac caaacagaac tcattttgaa caccctgact gcattttgc 450

ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttatgg 500  
agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
a 551

<210> 167  
<211> 87  
<212> PRT  
<213> Homo sapiens

<400> 167  
Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu  
1 5 10 15  
Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro  
20 25 30  
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe  
35 40 45  
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala  
50 55 60  
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met  
65 70 75  
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys  
80 85

<210> 168  
<211> 1371  
<212> DNA  
<213> Homo sapiens

<400> 168  
ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50  
ggaagcacag ctcagagctg gtctgccatg gacatcctgg tcccactcct 100  
gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150  
tgggctgctg gcagccccctg tgcaaaagct acttccctta cctgatggcc 200  
gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250  
cttcagccag ataaaggggc ttacaggagc ctccggaaa gtggccctac 300  
tggagctggg ctgcggaacc ggagccaact ttcatgttcta cccaccgggc 350  
tgcagggtca cctgcctaga cccaaatccc cacttgaga agttcctgac 400  
aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtg 450  
ctcctggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500  
gtctgcactc tgggtgtgtc ctctgtgcag agcccaagga aggtcctgca 550

ggagggtccgg agagtactga gaccgggagg tgtgctctt ttctggagc 600  
atgtggcaga accatatgga agctgggcct tcatgtggca gcaagtttc 650  
gagcccacccat gaaacacat tggggatggc tgctgcctca ccagagagac 700  
ctggaaggat cttgagaacg cccagttctc ccaaattccaa atggaacgcac 750  
agccccctcc cttgaagtgg ctacctgttg ggccccacat catggaaag 800  
gctgtcaaac aatcttccc aagctccaag gcactcattt gtccttccc 850  
cagcctccaa ttagaacaag ccacccacca gcctatctat cttccactga 900  
gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950  
ctctctcccc aacctctgcc agggcaatct ctaacttcaa tccgccttc 1000  
gacagtgaaa aagctctact tctacgctga cccagggagg aaacactagg 1050  
accctgttgt atcctcaact gcaagttct ggactagtct cccaacgttt 1100  
gcctcccaat gttgtccctt tccttcgttc ccatggtaaa gtcctctcg 1150  
cttcctcctt gaggctacac ccatgcgtct ctaggaactg gtcacaaaag 1200  
tcatggtgcc tgcattccctg ccaagccccctt ctgaccctctt ctccccacta 1250  
ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300  
atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350  
taataaatag acgaaaccac g 1371

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<210> 169
<211> 277
<212> PRT
<213> Homo sapiens

<400> 169
Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu
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Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro
   20          25          30          35          40          45

Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro
   35          40          45          50          55          60

Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser
   50          55          60          65          70          75

Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu
   65          70          75          80          85          90

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Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys  
95 100 105

Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu  
110 115 120

Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp  
125 130 135

Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val  
140 145 150

Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg  
155 160 165

Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr  
170 175 180

Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp  
185 190 195

Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys  
200 205 210

Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln  
215 220 225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly  
230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys  
245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile  
260 265 270

Tyr Leu Pro Leu Arg Gly Thr  
275

<210> 170

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 170

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agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150

agatgtcatt ccgtaaagta aacatcatca tcttggcct ggctgttgct 200

ctcttcttac tggtttgca ccataactc ctc agcttga gcagttgtt 250

aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300

ttgtccccaaa tgctctccga catgcagtag atggagaca agaggagatt 350

cctgtggtca tcgctgcata tgaagacagg cttggggggg ccattgcagc 400  
tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450  
ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgtat 500  
tccctgaaaa gcatcagata caaaaattgtc aattttgacc ctaaaactttt 550  
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gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700  
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<210> 171  
<211> 371  
<212> PRT  
<213> Homo sapiens

<400> 171

Met Ser Phe Arg Lys Val Asn Ile Ile Leu Val Leu Ala Val  
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Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser  
 20 25 30

Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro  
 35 40 45

Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp  
 50 55 60

Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp  
 65 70 75

Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn  
 80 85 90

Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr  
 95 100 105

Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser  
 110 115 120

Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly  
 125 130 135

Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu  
 140 145 150

Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys  
 155 160 165

Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile  
 170 175 180

Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala  
 185 190 195

Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val Val Ile Arg  
 200 205 210

Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp Tyr Lys  
 215 220 225

Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys Ser  
 230 235 240

Phe Asn Pro Gly Val Phe Val Ala Asn Leu Thr Glu Trp Lys Arg  
 245 250 255

Gln Asn Ile Thr Asn Gln Leu Glu Lys Trp Met Lys Leu Asn Val  
 260 265 270

Glu Glu Gly Leu Tyr Ser Arg Thr Leu Ala Gly Ser Ile Thr Thr  
 275 280 285

Pro Pro Leu Leu Ile Val Phe Tyr Gln Gln His Ser Thr Ile Asp

290                    295                    300  
Pro Met Trp Asn Val Arg His Leu Gly Ser Ser Ala Gly Lys Arg  
305                    310                    315  
Tyr Ser Pro Gln Phe Val Lys Ala Ala Lys Leu Leu His Trp Asn  
320                    325                    330  
Gly His Leu Lys Pro Trp Gly Arg Thr Ala Ser Tyr Thr Asp Val  
335                    340                    345  
Trp Glu Lys Trp Tyr Ile Pro Asp Pro Thr Gly Lys Phe Asn Leu  
350                    355                    360  
Ile Arg Arg Tyr Thr Glu Ile Ser Asn Ile Lys  
365                    370

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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aatgttctcc gacatgcagt agatgggaga caagaggaga ttccctgtggt 150

catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200

gcattcagca caacactcgn tccaatgtga tttctacat tgttactctc 250

aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300

aagcatcaga tacaaaattt tcaattttga ccctaaacctt ttggaaaggaa 350

aagtaaagga ggatcctgac cagggggaaat ccatgaaacc tttaaccctt 400

gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450

catggatgat gatgtaattt tgcaagggtga tattcttgcc cttaacaata 500

cagcactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550

gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

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tc当地tagct ggtacagata attcaaaaact gctgttggtt ttaattttgt 1800  
aacctgtggc ctgatctgta aataaaaactt acatffffca ataggtaaaa 1850  
aaaaaaaaaaa aaaaaaa 1866

<210> 174  
<211> 823  
<212> DNA  
<213> Homo sapiens

<400> 174  
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ctcaccattg aggcagctcc actgtctgtg ctggctgag ggtgctgc当地 150  
gtcatggggg cagccatctc ccagggggcc ct当地cgcca tc当地tgc当地aa 200  
cggtctc当地 ggcttcttgc tgctgctgct ctgggtc当地 ctctgctggg 250  
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cagagttcag ccagcctggg gtccagaact caagagtccg cctgcttgc当地 500  
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gccgggtccca ctcttccct aggctgagca cctctaggcc ctctaggttgc当地 700  
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<210> 175  
<211> 87  
<212> PRT  
<213> Homo sapiens

<400> 175  
Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys  
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Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Trp Val Ile Leu  
20 25 30  
  
Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu  
35 40 45  
  
Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro  
50 55 60  
  
His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser  
65 70 75  
  
Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr  
80 85

<210> 176  
<211> 1660  
<212> DNA  
<213> Homo sapiens

<400> 176  
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atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200  
gataacaatcc ttggcctgtg tattcctcgca ttagccttgt ctggccat 250  
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tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400  
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cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800  
agaagtaaaa atgatcctcc tgatcatccc atcccttcgt ctctctccat 850  
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cataactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100  
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gttttgctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400  
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cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550  
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<210> 177  
<211> 445  
<212> PRT  
<213> Homo sapiens

<400> 177  
Met Ser Gly Arg Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu  
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Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr  
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Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu  
35 40 45  
Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn  
50 55 60

Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys  
 65 70 75  
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu  
 80 85 90  
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val  
 95 100 105  
 Glu Leu Phe Gln Ile Thr Asn Lys Ala Ile Ser Ser Ala Pro Phe  
 110 115 120  
 Leu Leu Phe Gln Pro Leu Trp Thr Phe Ala Ile Leu Ile Phe Phe  
 125 130 135  
 Trp Val Leu Trp Val Ala Val Leu Leu Ser Leu Gly Thr Ala Gly  
 140 145 150  
 Ala Ala Gln Val Met Glu Gly Gly Gln Val Glu Tyr Lys Pro Leu  
 155 160 165  
 Ser Gly Ile Arg Tyr Met Trp Ser Tyr His Leu Ile Gly Leu Ile  
 170 175 180  
 Trp Thr Ser Glu Phe Ile Leu Ala Cys Gln Gln Met Thr Ile Ala  
 185 190 195  
 Gly Ala Val Val Thr Cys Tyr Phe Asn Arg Ser Lys Asn Asp Pro  
 200 205 210  
 Pro Asp His Pro Ile Leu Ser Ser Leu Ser Ile Leu Phe Phe Tyr  
 215 220 225  
 His Gln Gly Thr Val Val Lys Gly Ser Phe Leu Ile Ser Val Val  
 230 235 240  
 Arg Ile Pro Arg Ile Ile Val Met Tyr Met Gln Asn Ala Leu Lys  
 245 250 255  
 Glu Gln Gln His Gly Ala Leu Ser Arg Tyr Leu Phe Arg Cys Cys  
 260 265 270  
 Tyr Cys Cys Phe Trp Cys Leu Asp Lys Tyr Leu Leu His Leu Asn  
 275 280 285  
 Gln Asn Ala Tyr Thr Thr Ala Ile Asn Gly Thr Asp Phe Cys  
 290 295 300  
 Thr Ser Ala Lys Asp Ala Phe Lys Ile Leu Ser Lys Asn Ser Ser  
 305 310 315  
 His Phe Thr Ser Ile Asn Cys Phe Gly Asp Phe Ile Ile Phe Leu  
 320 325 330  
 Gly Lys Val Leu Val Val Cys Phe Thr Val Phe Gly Gly Leu Met  
 335 340 345  
 Ala Phe Asn Tyr Asn Arg Ala Phe Gln Val Trp Ala Val Pro Leu

350	355	360
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365	370	375
Ser Val Phe Glu Thr Val Leu Asp Ala Leu Phe Leu Cys Phe Ala		
380	385	390
Val Asp Leu Glu Thr Asn Asp Gly Ser Ser Glu Lys Pro Tyr Phe		
395	400	405
Met Asp Gln Glu Phe Leu Ser Phe Val Lys Arg Ser Asn Lys Leu		
410	415	420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu		
425	430	435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg		
440	445	

<210> 178  
 <211> 2773  
 <212> DNA  
 <213> Homo sapiens

<400> 178  
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 aaggggaaaaaa gaatattcat tctgtgttgtt gaaaattttt tgaaaaaaaaa 150  
 attgccttct tcaaacaagg gtgtcattct gatatttatg aggactgtt 200  
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 caatcgttat ccctaccacg atggagagaa tcctttatcg tcttagaaag 600  
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 ccacctattc cagggacaac tgcacagccg gtcactctga tgcagttct 750  
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tttctgctgc ttctaccacc agcatcccc gaccacaatc agtggccac 850  
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aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050  
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tttgcatg acaatgttagg aattgctgaa ttaaatgttt agaaggatga 2650  
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750  
aaaaaaaaaa aaaaaaaaaa aag 2773

<210> 179  
<211> 678  
<212> PRT  
<213> Homo sapiens

<400> 179  
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20 25 30  
Ala Lys Lys Ile Lys Arg Pro Lys Phe Thr Val Pro Gln Ile Asn  
35 40 45  
Cys Asp Val Lys Ala Gly Lys Ile Ile Asp Pro Glu Phe Ile Val  
50 55 60  
Lys Cys Pro Ala Gly Cys Gln Asp Pro Lys Tyr His Val Tyr Gly  
65 70 75  
Thr Asp Val Tyr Ala Ser Tyr Ser Ser Val Cys Gly Ala Ala Val  
80 85 90  
His Ser Gly Val Leu Asp Asn Ser Gly Gly Lys Ile Leu Val Arg  
95 100 105  
Lys Val Ala Gly Gln Ser Gly Tyr Lys Gly Ser Tyr Ser Asn Gly  
110 115 120  
Val Gln Ser Leu Ser Leu Pro Arg Trp Arg Glu Ser Phe Ile Val  
125 130 135  
Leu Glu Ser Lys Pro Lys Lys Gly Val Thr Tyr Pro Ser Ala Leu  
140 145 150

Thr Tyr Ser Ser Lys Ser Pro Ala Ala Gln Ala Gly Glu Thr  
 155 160 165  
 Thr Lys Ala Tyr Gln Arg Pro Pro Ile Pro Gly Thr Thr Ala Gln  
 170 175 180  
 Pro Val Thr Leu Met Gln Leu Leu Ala Val Thr Val Ala Val Ala  
 185 190 195  
 Thr Pro Thr Thr Leu Pro Arg Pro Ser Pro Ser Ala Ala Ser Thr  
 200 205 210  
 Thr Ser Ile Pro Arg Pro Gln Ser Val Gly His Arg Ser Gln Glu  
 215 220 225  
 Met Asp Leu Trp Ser Thr Ala Thr Tyr Thr Ser Ser Gln Asn Arg  
 230 235 240  
 Pro Arg Ala Asp Pro Gly Ile Gln Arg Gln Asp Pro Ser Gly Ala  
 245 250 255  
 Ala Phe Gln Lys Pro Val Gly Ala Asp Val Ser Leu Gly Leu Val  
 260 265 270  
 Pro Lys Glu Glu Leu Ser Thr Gln Ser Leu Glu Pro Val Ser Leu  
 275 280 285  
 Gly Asp Pro Asn Cys Lys Ile Asp Leu Ser Phe Leu Ile Asp Gly  
 290 295 300  
 Ser Thr Ser Ile Gly Lys Arg Arg Phe Arg Ile Gln Lys Gln Leu  
 305 310 315  
 Leu Ala Asp Val Ala Gln Ala Leu Asp Ile Gly Pro Ala Gly Pro  
 320 325 330  
 Leu Met Gly Val Val Gln Tyr Gly Asp Asn Pro Ala Thr His Phe  
 335 340 345  
 Asn Leu Lys Thr His Thr Asn Ser Arg Asp Leu Lys Thr Ala Ile  
 350 355 360  
 Glu Lys Ile Thr Gln Arg Gly Leu Ser Asn Val Gly Arg Ala  
 365 370 375  
 Ile Ser Phe Val Thr Lys Asn Phe Phe Ser Lys Ala Asn Gly Asn  
 380 385 390  
 Arg Ser Gly Ala Pro Asn Val Val Val Met Val Asp Gly Trp  
 395 400 405  
 Pro Thr Asp Lys Val Glu Glu Ala Ser Arg Leu Ala Arg Glu Ser  
 410 415 420  
 Gly Ile Asn Ile Phe Phe Ile Thr Ile Glu Gly Ala Ala Glu Asn  
 425 430 435  
 Glu Lys Gln Tyr Val Val Glu Pro Asn Phe Ala Asn Lys Ala Val

440	445	450
Cys Arg Thr Asn Gly Phe Tyr Ser Leu His Val Gln Ser Trp Phe		
455	460	465
Gly Leu His Lys Thr Leu Gln Pro Leu Val Lys Arg Val Cys Asp		
470	475	480
Thr Asp Arg Leu Ala Cys Ser Lys Thr Cys Leu Asn Ser Ala Asp		
485	490	495
Ile Gly Phe Val Ile Asp Gly Ser Ser Ser Val Gly Thr Gly Asn		
500	505	510
Phe Arg Thr Val Leu Gln Phe Val Thr Asn Leu Thr Lys Glu Phe		
515	520	525
Glu Ile Ser Asp Thr Asp Thr Arg Ile Gly Ala Val Gln Tyr Thr		
530	535	540
Tyr Glu Gln Arg Leu Glu Phe Gly Phe Asp Lys Tyr Ser Ser Lys		
545	550	555
Pro Asp Ile Leu Asn Ala Ile Lys Arg Val Gly Tyr Trp Ser Gly		
560	565	570
Gly Thr Ser Thr Gly Ala Ala Ile Asn Phe Ala Leu Glu Gln Leu		
575	580	585
Phe Lys Lys Ser Lys Pro Asn Lys Arg Lys Leu Met Ile Leu Ile		
590	595	600
Thr Asp Gly Arg Ser Tyr Asp Asp Val Arg Ile Pro Ala Met Ala		
605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr Ala Ile Gly Val Ala Trp		
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile Ala Thr His Pro Ala Arg		
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe Asp Asn Leu His Gln Tyr		
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys Thr Glu Phe Asn Ser Gln		
665	670	675
Pro Arg Asn		

<210> 180  
<211> 1759  
<212> DNA  
<213> Homo sapiens

<400> 180  
caggatgaac tggttgcagt ggctgctgct gctgcggggg cgctgagagg 50

acacgagctc tatgccttc cggctgctca tcccgtcg 100  
gcgctgctgc ctcagcacca tggtgccca ggtcccgacg gctccgcgcc 150  
agatcccccc cactacagtt tttctctgac tctaattgat gcactggaca 200  
ccttgctgat tttgggaat gtctcagaat tccaaagagt ggtaaagt 250  
ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgttga 300  
aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350  
agaaggctgg ggtggaaagta gaggctggat ggccctgttc cgggcctctc 400  
ctgagaatgg ctgaggaggc ggcccgaaaa ctcctcccag ccttcagac 450  
ccccactggc atgccccatg gaacagtgaa cttacttcat ggcgtgaacc 500  
caggagagac ccctgtcacc tgtacggcag ggattggac cttcattgtt 550  
gaatttgcca ccctgagcag cctcactggc gacccgggt tcgaagatgt 600  
ggccagagtg gctttgatgc gcctctggaa gagccggta gatatgggc 650  
tggtcggcaa ccacattgat gtgctcactg gcaagtgggt ggcccaggac 700  
gcaggcatcg gggctggcgt ggactcctac tttgagtact tggtaaagg 750  
agccatcctg cttcaggata agaagctcat ggccatgttc ctagagtata 800  
acaaagccat ccggaactac acccgcttcg atgactggta cctgtgggtt 850  
cagatgtaca aggggactgt gtccatgcca gtctccagt cttggaggc 900  
ctactggcct ggtttcaga gcctcattgg agacattgac aatgccatga 950  
ggaccttcct caactactac actgtatgga agcagttgg gggctcccg 1000  
gaattctaca acattcctca gggatacaca gtggagaagc gagaggccta 1050  
cccacttcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgcca 1100  
cgggggatcc caccctccta gaactcgaa gagatgctgt ggaatccatt 1150  
aaaaaaatca gcaaggtgga gtgcggattt gcaacaatca aagatctgcg 1200  
agaccacaag ctggacaacc gcatggagtc gttttcctg gccgagactg 1250  
tgaaaatccctt ctacccctg tttgacccaa ccaacttcat ccacaacaat 1300  
gggtccacct tcgacgcggc gatcaccccc tatggggagt gcatcctgg 1350  
ggctgggggg tacatcttca acacagaagc tcacccatc gacccgtccg 1400  
ccctgcactg ctgccagagg ctgaaggaag agcagttgg ggtggaggac 1450  
ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500

aaacactgtt agttcggggc catggaaacc tccagcaagg ccaggaacac 1550  
tcttcacc agaaaaccat gaccaggcaa gggagaggaa gcctgccaaa 1600  
cagaagggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650  
ggcattactg ggacaggttt tcctagactc ctcataacca ctggataatt 1700  
tttttatttt tattttttg aggctaaact ataataaatt gctttggct 1750  
atcataaaa 1759

<210> 181  
<211> 541  
<212> PRT  
<213> Homo sapiens

<400> 181  
Met Pro Phe Arg Leu Leu Ile Pro Leu Gly Leu Leu Cys Ala Leu  
1 5 10 15  
Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro  
20 25 30  
Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu  
35 40 45  
Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val  
50 55 60  
Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn  
65 70 75  
Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu  
80 85 90  
Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala  
95 100 105  
Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala  
110 115 120  
Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro  
125 130 135  
Tyr Gly Thr Val Asn Leu Leu His Gly Val Asn Pro Gly Glu Thr  
140 145 150  
Pro Val Thr Cys Thr Ala Gly Ile Gly Thr Phe Ile Val Glu Phe  
155 160 165  
Ala Thr Leu Ser Ser Leu Thr Gly Asp Pro Val Phe Glu Asp Val  
170 175 180  
Ala Arg Val Ala Leu Met Arg Leu Trp Glu Ser Arg Ser Asp Ile  
185 190 195  
Gly Leu Val Gly Asn His Ile Asp Val Leu Thr Gly Lys Trp Val

DRAFT

200	205	210
Ala Gln Asp Ala Gly Ile Gly Ala Gly Val Asp Ser Tyr Phe Glu		
215	220	225
Tyr Leu Val Lys Gly Ala Ile Leu Leu Gln Asp Lys Lys Leu Met		
230	235	240
Ala Met Phe Leu Glu Tyr Asn Lys Ala Ile Arg Asn Tyr Thr Arg		
245	250	255
Phe Asp Asp Trp Tyr Leu Trp Val Gln Met Tyr Lys Gly Thr Val		
260	265	270
Ser Met Pro Val Phe Gln Ser Leu Glu Ala Tyr Trp Pro Gly Leu		
275	280	285
Gln Ser Leu Ile Gly Asp Ile Asp Asn Ala Met Arg Thr Phe Leu		
290	295	300
Asn Tyr Tyr Thr Val Trp Lys Gln Phe Gly Gly Leu Pro Glu Phe		
305	310	315
Tyr Asn Ile Pro Gln Gly Tyr Thr Val Glu Lys Arg Glu Gly Tyr		
320	325	330
Pro Leu Arg Pro Glu Leu Ile Glu Ser Ala Met Tyr Leu Tyr Arg		
335	340	345
Ala Thr Gly Asp Pro Thr Leu Leu Glu Leu Gly Arg Asp Ala Val		
350	355	360
Glu Ser Ile Glu Lys Ile Ser Lys Val Glu Cys Gly Phe Ala Thr		
365	370	375
Ile Lys Asp Leu Arg Asp His Lys Leu Asp Asn Arg Met Glu Ser		
380	385	390
Phe Phe Leu Ala Glu Thr Val Lys Tyr Leu Tyr Leu Leu Phe Asp		
395	400	405
Pro Thr Asn Phe Ile His Asn Asn Gly Ser Thr Phe Asp Ala Val		
410	415	420
Ile Thr Pro Tyr Gly Glu Cys Ile Leu Gly Ala Gly Gly Tyr Ile		
425	430	435
Phe Asn Thr Glu Ala His Pro Ile Asp Leu Ala Ala Leu His Cys		
440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp Glu Val Glu Asp Leu Met		
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser Arg Ser Lys Phe Gln Lys		
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu Pro Pro Ala Arg Pro Gly		
485	490	495

Thr Leu Phe Ser Pro Glu Asn His Asp Gln Ala Arg Glu Arg Lys  
500 505 510

Pro Ala Lys Gln Lys Val Pro Leu Leu Ser Cys Pro Ser Gln Pro  
515 520 525

Phe Thr Ser Lys Leu Ala Leu Leu Gly Gln Val Phe Leu Asp Ser  
530 535 540

Ser

<210> 182

<211> 2056

<212> DNA

<213> Homo sapiens

<400> 182

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catctgggtt tgggcagaaa ggagggtgct tcggagcccg ccctttctga 100

gtttcctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150

tcaagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200

gctttatTTT ggaaagaaac aatgttctag gtcaaactga gtctacccaa 250

tgcagacttt cacaatggtt ctagaagaaa tctggacaag tcttttcatg 300

tggTTTTCT acgcatttat tccatgtttg ctcacagatg aagtggccat 350

tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400

tcttgatgtg gagcccagtg atcgccctg gagaaacagt gtactattct 450

gtcgaatacc agggggagta cgagagccctg tacacgagcc acatctggat 500

ccccagcagc tggtgctcac tcactgaagg tcctgagtgt gatgtcactg 550

atgacatcac ggccactgtg ccatacaacc ttctgttcag ggccacattg 600

ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650

ctcaaccatc cttacccgac ctgggatgga gatcacccaa gatggcttcc 700

acctggttat tgagctggag gacctggggc cccagttga gttcctgtg 750

gcctactgga ggagggagcc tggtgccgag gaacatgtca aaatggtag 800

gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttctgtgaagg ccattgggag gtacagcgcc 900

ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccccttgt 950

actggccctg tttgcctttg ttggcttcat gctgatcctt gtggtcgtgc 1000

cactgttcgt ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050  
gtgggtgtcc tcccagacac cttgaaaata accaattcac cccagaagtt 1100  
aatcagctgc agaaggaggagg aggtggatgc ctgtgccacg gctgtatgt 1150  
ctcctgagga actcctcagg gcctggatct cataggttg cgaaagggcc 1200  
caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250  
aagttgtgtt tctgtttcc gccacggaca agggatgaga gaagtaggaa 1300  
gagcctgttg tctacaagtc tagaagcaac catcagaggc agggtggttt 1350  
gtctaacaga acactgactg aggcttaggg gatgtgacct ctagactggg 1400  
ggctgccact tgctggctga gcaaccctgg gaaaagtgac ttcatccctt 1450  
cggtcctaag ttttctcatc tgtaatgggg gaattaccta cacacctgct 1500  
aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550  
tacacccagc acttgcaagg ctagaggaa actggtgaca ctctacagtc 1600  
tgactgattc agtgtttctg gagagcagga cataaatgta ttagtggaaat 1650  
gatcaaggac tctacacact gggggcttg gagagccac tttccagaa 1700  
taatccttga gagaaaagga atcatggag caatgggtt gagttcactt 1750  
caagcccaat gccgggtcag agggaaatgg cttagcgagc tctacagtag 1800  
gtgacctgga ggaaggtcac agccacactg aaaatggat gtgcataaac 1850  
acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900  
agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950  
gtaacatgtg catgtttgtt gtgctccctt tttctgttgg taaagtacag 2000  
aattcagcaa ataaaaaggg ccaccctggc caaaagcggt aaaaaaaaaa 2050  
aaaaaaaa 2056

<210> 183  
<211> 311  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Signal peptide  
<222> 1-29  
<223> Signal peptide

<220>  
<221> N-glycosylation sites  
<222> 40-43, 134-137  
<223> N-glycosylation sites.

<220>  
 <221> Tissue factor proteins homology  
 <222> 92-119  
 <223> Tissue factor proteins homology  
  
 <220>  
 <221> Transmembrane domain  
 <222> 230-255  
 <223> Transmembrane domain  
  
 <220>  
 <221> Integrins alpha chain protein homology  
 <222> 232-262  
 <223> Integrins alpha chain protein homology  
  
 <400> 183  
 Met Gln Thr Phe Thr Met Val Leu Glu Ile Trp Thr Ser Leu  
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 Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp  
     20   25   30  
  
 Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser  
     35   40   45  
  
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro  
     50   55   60  
  
 Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu  
     65   70   75  
  
 Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser  
     80   85   90  
  
 Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala  
     95   100   105  
  
 Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln  
     110   115   120  
  
 Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser  
     125   130   135  
  
 Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe  
     140   145   150  
  
 His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe  
     155   160   165  
  
 Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val  
     170   175   180  
  
 Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr Met  
     185   190   195  
  
 Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys  
     200   205   210

Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu  
215 220 225  
Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe  
230 235 240  
Val Gly Phe Met Leu Ile Leu Val Val Pro Leu Phe Val Trp  
245 250 255  
Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val  
260 265 270  
Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys Leu Ile  
275 280 285  
Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val Met  
290 295 300  
Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser  
305 310

<210> 184  
<211> 808  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 654, 711, 748  
<223> unknown base

<400> 184  
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tagacctcag ctccaaacata tgcattctga agaaaagatgg ctgagatgac 150  
agaatgcttt attttgaaaa gaaacaatgt tctaggtcaa actgagtcta 200  
ccaaatgcag actttcacaa tggttctaga agaaaatctgg acaagtcttt 250  
tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300  
gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350  
gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400  
attctgtcga ataccagggg gagtacgaga gcctgtacac gagccacatc 450  
tggatccccca gcagctggtg ctcactcact gaaggtcctg agtgtgatgt 500  
cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550  
cattgggctc acagaccta gcctggagca tcctgaagca tcccttaat 600  
agaaaactcaa ccataccttac ccgacacctgg atggagatca ccaaagatgg 650

cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700  
ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
gaacccttg cggccgctgg ggtatcttc gaaaaagag aggccaata 800  
tgaccac 808

<210> 185  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 185  
aggcttcgct gcgactagac ctc 23

<210> 186  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
ccaggtcggg taaggatgg tgag 24

<210> 187  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 187  
tttctacgca ttgattccat gtttgcac agatgaagt gccattctgc 50

<210> 188  
<211> 1227  
<212> DNA  
<213> Homo sapiens

<400> 188  
cgacgcgtg ggccgccacc tccgaaacaa gccatggtgg cggcgcacggt 50  
ggcagcggcg tggctgctcc tgtggctgc ggctgcgcg cagcaggagc 100  
aggacttcta cgacttcaag gcggtaaca tccggggcaa actggtgtcg 150  
ctggagaagt accgcggatc ggtgtccctg gtggtaatg tggccagcga 200  
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcag 250  
acctgggccc ccaccacttt aacgtgctcg cttcccttg caaccagtt 300

ggccaacagg agcctgacag caacaaggag attgagagct ttgcccggcg 350  
cacctacagt gtctcattcc ccatgttttag caagattgca gtcaccggta 400  
ctggtgccca tcctgccttc aagtacctgg cccagacttc tgggaaggag 450  
cccacctgga acttctggaa gtacctagta gccccagatg gaaagggtggt 500  
aggggcttgg gaccaactg tgtcagtggaa ggaggtcaga cccagatca 550  
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600  
ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tggggctgac 650  
caatgcaaac tcaaattggtg cttcaaaggag agagacccac tgactctcct 700  
tcctttactc ttatgccatt ggtcccatca ttcttgggg ggaaaaattc 750  
tagtattttg attatttcaa tcttacagca acaaataatggg actcctggcc 800  
aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850  
acaaaaatgt gtggcaaata gaagtatatac aagcaataat ctcccaccca 900  
aggcttctgt aaactggac caatgattac ctcatagggc tggtgtgagg 950  
attaggatga aatacctgtg aaagtgccta ggcagtgcac gccaaatagg 1000  
aggcattcaa tgaacatttt ttgcataataa accaaaaat aacttgttat 1050  
caataaaaac ttgcataccaa catgaatttc cagccgatga taatccagggc 1100  
caaaggttta gttgtgtta tttcctctgt attattttct tcattacaaa 1150  
agaaatgcaa gttcattgtaa acaatccaaa caatacctca cgatataaaaa 1200  
taaaaaatgaa agtatcctcc tcaaaaaa 1227

&lt;210&gt; 189

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 189

Met	Val	Ala	Ala	Thr	Val	Ala	Ala	Ala	Trp	Leu	Leu	Leu	Trp	Ala
1					5					10				15

Ala	Ala	Cys	Ala	Gln	Gln	Glu	Gln	Asp	Phe	Tyr	Asp	Phe	Lys	Ala
				20				25					30	

Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly
				35				40					45	

Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr
				50					55				60	

Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Leu	Gln	Arg	Asp	Leu	Gly
				65				70					75	

Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly  
80 85 90  
Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg  
95 100 105  
Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val  
110 115 120  
Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr  
125 130 135  
Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala  
140 145 150  
Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val  
155 160 165  
Glu Glu Val Arg Pro Gln Ile Thr Ala Leu Val Arg Lys Leu Ile  
170 175 180  
Leu Leu Lys Arg Glu Asp Leu  
185

<210> 190

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 190

gcaggacttc tacgacttca aggc 24

<210> 191

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 191

agtctgggcc aggtacttga aggc 24

<210> 192

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 192

caacatccgg ggcaaactgg tgtcgctgga gaagtaccgc ggatcggtgt 50

<210> 193

DNA sequence

<211> 2187  
<212> DNA  
<213> Homo sapiens  
  
<400> 193  
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acgtcggat gctgcgcctg gggaggctgt gcgcggggag ctcgggggtg 100  
ctggggccccc gggccgcctt ctctcgagt tggcaggaag ccaggttgca 150  
gggtgtccgc ttccctcagtt ccagagaggt ggatcgcatg gtctccacgc 200  
ccatcgagg cctcagctac gttcagggt gcaccaaaaa gcatcttaac 250  
agcaagactg tggccagtg cctggagacc acagcacaga gggtcccaga 300  
acgagaggcc ttggcgtcc tccatgaaga cgtcagggtg acctttgcc 350  
aactcaagga ggaggtggac aaagctgctt ctggcctctt gagcattggc 400  
ctctgcaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatt 450  
ggtgctcatg cagttggcca ccgcccaggc gggcatcattt ctggtgtctg 500  
tgaacctcagc ctaccaggct atgaaactgg agtatgtcctt caagaagggt 550  
ggctgcaagg cccttgcgtt ccccaagcaa ttcaagaccc agcaataacta 600  
caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650  
ccttgaagag tcagaggctc ccagatctga ccacagtcat ctcgggtggat 700  
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acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250  
tggtgggtgc ttatggaacc acagagaaca gtcccgtgac attcgcgac 1300  
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gtttgtcaca aactaccccc tcaccatttc aggaaagatc cagaaattca 1850  
aacttcgaga gcagatggaa cgacatctaa atctgtaat aaagcagcag 1900  
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aatgtcaagg aattgactga acgaactaag agtcctgga tgggtccggg 2050  
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&lt;210&gt; 194

&lt;211&gt; 615

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 194

Met	Ala	Val	Tyr	Val	Gly	Met	Leu	Arg	Leu	Gly	Arg	Leu	Cys	Ala
1				5				10					15	

Gly	Ser	Ser	Gly	Val	Leu	Gly	Ala	Arg	Ala	Ala	Leu	Ser	Arg	Ser
				20				25					30	

Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg
					35			40					45	

Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr
				50				55					60	

Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly
					65			70					75	

Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala
					80			85					90	

Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu  
                  95                     100                     105  
 Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly  
                  110                     115                     120  
 Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr  
                  125                     130                     135  
 Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile  
                  140                     145                     150  
 Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr  
                  155                     160                     165  
 Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln  
                  170                     175                     180  
 Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro  
                  185                     190                     195  
 Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu  
                  200                     205                     210  
 Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly  
                  215                     220                     225  
 Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln  
                  230                     235                     240  
 His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His  
                  245                     250                     255  
 Asp Pro Ile Asn Ile Gln Phe Thr Ser Gly Thr Thr Gly Ser Pro  
                  260                     265                     270  
 Lys Gly Ala Thr Leu Ser His Tyr Asn Ile Val Asn Asn Ser Asn  
                  275                     280                     285  
 Ile Leu Gly Glu Arg Leu Lys Leu His Glu Lys Thr Pro Glu Gln  
                  290                     295                     300  
 Leu Arg Met Ile Leu Pro Asn Pro Leu Tyr His Cys Leu Gly Ser  
                  305                     310                     315  
 Val Ala Gly Thr Met Met Cys Leu Met Tyr Gly Ala Thr Leu Ile  
                  320                     325                     330  
 Leu Ala Ser Pro Ile Phe Asn Gly Lys Lys Ala Leu Glu Ala Ile  
                  335                     340                     345  
 Ser Arg Glu Arg Gly Thr Phe Leu Tyr Gly Thr Pro Thr Met Phe  
                  350                     355                     360  
 Val Asp Ile Leu Asn Gln Pro Asp Phe Ser Ser Tyr Asp Ile Ser  
                  365                     370                     375  
 Thr Met Cys Gly Gly Val Ile Ala Gly Ser Pro Ala Pro Pro Glu

380	385	390
Leu Ile Arg Ala Ile Ile Asn Lys Ile Asn Met Lys Asp Leu Val		
395	400	405
Val Ala Tyr Gly Thr Thr Glu Asn Ser Pro Val Thr Phe Ala His		
410	415	420
Phe Pro Glu Asp Thr Val Glu Gln Lys Ala Glu Ser Val Gly Arg		
425	430	435
Ile Met Pro His Thr Glu Ala Arg Ile Met Asn Met Glu Ala Gly		
440	445	450
Thr Leu Ala Lys Leu Asn Thr Pro Gly Glu Leu Cys Ile Arg Gly		
455	460	465
Tyr Cys Val Met Leu Gly Tyr Trp Gly Glu Pro Gln Lys Thr Glu		
470	475	480
Glu Ala Val Asp Gln Asp Lys Trp Tyr Trp Thr Gly Asp Val Ala		
485	490	495
Thr Met Asn Glu Gln Gly Phe Cys Lys Ile Val Gly Arg Ser Lys		
500	505	510
Asp Met Ile Ile Arg Gly Gly Glu Asn Ile Tyr Pro Ala Glu Leu		
515	520	525
Glu Asp Phe Phe His Thr His Pro Lys Val Gln Glu Val Gln Val		
530	535	540
Val Gly Val Lys Asp Asp Arg Met Gly Glu Glu Ile Cys Ala Cys		
545	550	555
Ile Arg Leu Lys Asp Gly Glu Glu Thr Thr Val Glu Glu Ile Lys		
560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr		
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile		
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu		
605	610	615

<210> 195  
<211> 642  
<212> DNA  
<213> Homo sapiens

<400> 195  
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agcagttgcg gatgatcctg cccaaacccc tgtaccattg cctgggttcc 100  
gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcatcctggc 150

ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200  
gaggcacctt cctgtatggt acccccacga tgttcggtga cattctgaac 250  
cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300  
tgctgggtcc cctgcaccc cagagttgat ccgagccatc atcaacaaga 350  
taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtcac 400  
gtgacattcg cgcaattccc tgaggacact gtggagcaga aggcagaaag 450  
cgtggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500  
cagggacgct ggcaaagctg aacacgcccc gggagctgtg catccgaggg 550  
tactgcgtca tgctggctca ctgggtgag cctcagaaga cagaggaagc 600  
agtggatcag gacaagtggt attggacagg agatgtcgcc ac 642

<210> 196  
<211> 1575  
<212> DNA  
<213> Homo sapiens

<400> 196  
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gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100  
aggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150  
ccgaacaaga tgaagacagt gaagtgcgcg ccggcgtgg acgtctgcac 200  
cgaggccgtg gggcggtgg agaccatcca cggacaattc tcgctggcag 250  
tgcggggttt cgggtcggga ctccccggca agaatgaccg cggcctggat 300  
cttcacgggc ttctggcggtt catccagctg cagcaatgcg ctcaggatcg 350  
ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggt 400  
atgagagtgc atacccgccc aacggcgtgg agtgcgtacag ctgtgtggc 450  
ctgagccggg aggctgcca gggtacatcg ccggcggcgtg tgagctgcta 500  
caacgccagc gatcatgtct acaagggtcg ctgcgacggc aacgtcacct 550  
tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600  
gatgaattct gcactcggga tggagtaaca ggcggcgggt tcacgctcag 650  
tggctcctgt tgccagggtt cccgctgtaa ctctgaccc tcgaacaaga 700  
cctacttctc ccctcgaatc ccaccccttg tccggctgcc ccctccagag 750  
cccacgactg tggcctcaac cacatctgtc accacttcta cctcgcccc 800

agtgagaccc acatccacca ccaaaccat gccagcgcca accagtcaga 850  
ctccgagaca gggagtagaa cacgaggcct cccgggatga ggagcccagg 900  
ttgactggag gcgcgcgtgg ccaccaggac cgcatcaatt cagggcagta 950  
tcctgaaaaa ggggggcccc agcagcccc taataaaggc tgtgtggctc 1000  
ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgtctta 1050  
ctgtgagctt ctccacctgg aaattccct ctcacctact tctctggccc 1100  
tgggtacccc ttttctcatc acttcctgtt cccaccactg gactgggctg 1150  
gcccagcccc tggtttcca acattcccc gtatccccag cttctgctgc 1200  
gctggtttgc ggctttggaa aataaaatac cgttgtatat attctgccag 1250  
gggtgttcta gcttttgag gacagctcct gtatccttct catccttgc 1300  
tctccgcttg tcctcttgc atgttaggac agagtgagag aagtcaagctg 1350  
tcacgggaa ggtgagagag aggatgctaa gcttcctact cactttctcc 1400  
tagccagcct ggactttgga gcgtggggtg ggtggacaa tggctcccc 1450  
ctctaagcac tgcctccct actccccgca tctttggga atcggttccc 1500  
catatgtctt ctttactaga ctgtgagctc ctgggggggg gcccggtagc 1550  
ccaattcgcc ctatagttag tcgta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met	Asp	Pro	Ala	Arg	Lys	Ala	Gly	Ala	Gln	Ala	Met	Ile	Trp	Thr
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Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala	
			20				25				30			

Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser
	35						40					45		

Pro	Asn	Lys	Met	Lys	Thr	Val	Lys	Cys	Ala	Pro	Gly	Val	Asp	Val
			50				55					60		

Cys	Thr	Glu	Ala	Val	Gly	Ala	Val	Glu	Thr	Ile	His	Gly	Gln	Phe
	65						70					75		

Ser	Leu	Ala	Val	Arg	Gly	Cys	Gly	Ser	Gly	Leu	Pro	Gly	Lys	Asn
			80				85					90		

Asp	Arg	Gly	Leu	Asp	Leu	His	Gly	Leu	Leu	Ala	Phe	Ile	Gln	Leu
			95					100				105		

Gln Gln Cys Ala Gln Asp Arg Cys Asn Ala Lys Leu Asn Leu Thr  
 110 115 120  
 Ser Arg Ala Leu Asp Pro Ala Gly Asn Glu Ser Ala Tyr Pro Pro  
 125 130 135  
 Asn Gly Val Glu Cys Tyr Ser Cys Val Gly Leu Ser Arg Glu Ala  
 140 145 150  
 Cys Gln Gly Thr Ser Pro Pro Val Val Ser Cys Tyr Asn Ala Ser  
 155 160 165  
 Asp His Val Tyr Lys Gly Cys Phe Asp Gly Asn Val Thr Leu Thr  
 170 175 180  
 Ala Ala Asn Val Thr Val Ser Leu Pro Val Arg Gly Cys Val Gln  
 185 190 195  
 Asp Glu Phe Cys Thr Arg Asp Gly Val Thr Gly Pro Gly Phe Thr  
 200 205 210  
 Leu Ser Gly Ser Cys Cys Gln Gly Ser Arg Cys Asn Ser Asp Leu  
 215 220 225  
 Arg Asn Lys Thr Tyr Phe Ser Pro Arg Ile Pro Pro Leu Val Arg  
 230 235 240  
 Leu Pro Pro Pro Glu Pro Thr Thr Val Ala Ser Thr Thr Ser Val  
 245 250 255  
 Thr Thr Ser Thr Ser Ala Pro Val Arg Pro Thr Ser Thr Thr Lys  
 260 265 270  
 Pro Met Pro Ala Pro Thr Ser Gln Thr Pro Arg Gln Gly Val Glu  
 275 280 285  
 His Glu Ala Ser Arg Asp Glu Glu Pro Arg Leu Thr Gly Gly Ala  
 290 295 300  
 Ala Gly His Gln Asp Arg Ser Asn Ser Gly Gln Tyr Pro Ala Lys  
 305 310 315  
 Gly Gly Pro Gln Gln Pro His Asn Lys Gly Cys Val Ala Pro Thr  
 320 325 330  
 Ala Gly Leu Ala Ala Leu Leu Ala Val Ala Ala Gly Val Leu  
 335 340 345

Leu

<210> 198  
 <211> 1657  
 <212> DNA  
 <213> Homo sapiens

<400> 198  
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acgccatgga gttggtgctg gtcttcctct gcagcctgct ggccccatg 100  
gtcctggcca gtgcagctga aaaggagaag gaaatggacc ctttccatta 150  
tgattaccag accctgagga ttggggact ggtgtcgct gtggccctct 200  
tctcggttgg gatcctcctt atcctaagtc gcaggtgcaa gtgcagttc 250  
aatcagaagc cccggggccc aggagatgag gaagcccagg tggagaacct 300  
catcaccgccc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350  
catcaggtgg aagcctctgg aacctgaggc ggctgcttga acctttggat 400  
gcaaatgtcg atgcttaaga aaaccggcca cttagcaac agcccttcc 450  
ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500  
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gcggtcctgc ccacccccc tgatgtgtgt gtgtgtgtgt gtgtgtgact 600  
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cacatggcca tctgctcctc cctgcccccg tggccctcca tcaccccttg 750  
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acgtcaggca ggctatgccc ttccgtgg 1050  
cacgaggagt ccccatctgc cccgccccctt cacagagcgc ccggggattc 1100  
caggccccagg gcttctactc tgccctggg 1150  
ttctcagcaa taactccatg ggctctgg 1200  
cctgcttctg agacttcaat ctacagccca gtcacccat 1250  
cagtcctgc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300  
ccgttggggc cagcacacccg ggatggatgg 1350  
cttctctgcc tacgtccct tagatggca gcagaggca 1400  
cttgctctg cctgtcggtg gtcagagcgg tgagcgaggt gggttggaga 1450  
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aacgagatgt ggaactcaac ccagatcccc cccctcctgt cctctgtgtt 1550  
cccgccggaaa ccaaccaaac cgtgcgctgt gaccattgc tgttcttgt 1600  
atcgtgatct atcctcaaca acaacagaaaa aaaggaataa aatatccttt 1650  
gtttcct 1657

<210> 199  
<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 199  
Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met  
1 5 10 15  
Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe  
20 25 30  
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala  
35 40 45  
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg  
50 55 60  
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu  
65 70 75  
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro  
80 85 90  
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp  
95 100 105  
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala  
110 115 120

<210> 200  
<211> 415  
<212> DNA  
<213> Homo sapiens

<400> 200  
aaacctgacg ccatgaagat cccggtcctt cctgccgtgg tgctcctctc 50  
cctcctggtg ctccactctg cccagggagc caccctgggt ggtcctgagg 100  
aagaaagcac cattgagaat tatgcgtcac gaccggagc ctttaacacc 150  
ccgttcctga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200  
cctgaactgg cacggcctct ttgagtctat caaaaaggaaa cttccttcc 250  
tcaactggga tgccttcct aagctgaaag gactgaggag cgcaactcct 300  
gatgcccagt gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350

tgattctcaa cctaccataa ctcttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu  
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu  
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn  
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala  
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg  
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly  
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln  
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50

ggggagatt gccttgcct cagtgattct cacctgcctc tcccttctgg 100

caggcagggt ctcccagggtt gttcttctcc agccagttcc aactcaggag 150

acaggtccca aggccatggg agatctctcc tgtggcttg ccggccactc 200

atgagagtgt ttttgttaa agtattttt agaatactgt tgacttcttc 250

atgatttaat aaccatcctt tgcgaagttt tatgaggctt tagggaaatg 300

tcaaccctca aattttgtt atactagatg gttccattt acccaccact 350

attttaaggt ccctttatTT ttaggttcaa gttcatttg acttgagaaaa 400

gtgcccttct gcagcttcat tgattttgtt tatcttcaact attaattgtt 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgttagtg atcccacaaa tgtgattgtt 550

aatttaaatg ttattctaat attagtacat tcagttgtga tgtaatatga 600  
ataaccagaa tctatttctt aaaagtttg agtataatgg tcaactagat 650  
atttgtatag aaagactgaa tagtgatg 678

<210> 203  
<211> 52  
<212> PRT  
<213> Homo sapiens

<400> 203  
Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu  
1 5 10 15  
Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro  
20 25 30  
Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser  
35 40 45  
Cys Gly Phe Ala Gly His Ser  
50

<210> 204  
<211> 1917  
<212> DNA  
<213> Homo sapiens

<400> 204  
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agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150  
tctttggaga attacgaacc atgttcaagt caaaaactgca gctgctacca 200  
tggtgtcata gaagaggatc taactcctt ccgaggaggc atctccagga 250  
agatgatggc agaggtagtc agacggaagc tagggaccca ctatcagatc 300  
actaagaaca gactgtaccg ggaaaatgac tgcatgttcc cctcaaggtg 350  
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tggagatggt gatcaatgta cgagattatc ctcaggttcc taaatggatg 450  
gagcctgcca tcccagtctt ctccttcagt aagacatcag agtaccatga 500  
tatcatgtat cctgcttggc cattttggc agggggacct gctgtttggc 550  
caatttatcc tacaggtctt ggacgggtggg acctcttcag agaagatctg 600  
gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650  
tttccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700

ctcgaaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750  
tggaaatcta tgaaagatac cttagggaaag ccagctgcta aggatgtcca 800  
tcttggttat cactgcaa at acaagtatct gtttaatttt cgaggcgtag 850  
ctgcaagttt ccggtttaaa cacctttcc tgtgtggctc acttgttttc 900  
catgttggtg atgagtggct agaatttttc tatccacagc tgaagccatg 950  
ggttcactat atcccagtca aaacagatct ctccaatgtc caagagctgt 1000  
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ggaagccagt ttatttagaa ccatttgcag atggatgaca tcacctgtta 1100  
ctgggagaac ctctttagtg aatactctaa attcctgtct tataatgtaa 1150  
cgagaaggaa aggttatgtat caaatttattc ccaaaatgtt gaaaactgaa 1200  
ctatagtagt catcatagga ccatagtcct ctttggca acagatctca 1250  
gatatcctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300  
tatctgctat caagccaa at acctggttt ctttatcatg ctgcacccag 1350  
agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400  
agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450  
tgaacccaaac tctacccccc attttcttaa gaccaatcac agcttgc 1500  
tcagatcatc cacctgtgtg agtccatcac tgtgaaattt actgtgtcc 1550  
tgtgatgatg ccctttgtcc cattatttgg agcagaaaat tcgtcattt 1600  
gaagtagtagt aactcattgc tggaaattgtg aaattattca aggcgtgatc 1650  
tctgtcactt tattttatg taggaaaccc tatggggttt atgaaaaata 1700  
cttggggatc attctctgaa tggtctaagg aagcggtagc catgccatgc 1750  
aatgatgttag gagttctttt ttgtaaaacc ataaaactctg ttactcagga 1800  
ggtttctata atgccacata gaaagaggcc aattgcata gtaattattt 1850  
caattggatt tcaggcccccc ttttgc ttcatgccct acttcttaat 1900  
gcctctctaa agccaaa 1917

<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu  
1 5 10 15

Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser  
                   20                  25                  30  
  
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn  
                   35                  40                  45  
  
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val  
                   50                  55                  60  
  
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys  
                   65                  70                  75  
  
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln  
                   80                  85                  90  
  
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro  
                   95                  100                105  
  
 Ser Arg Cys Ser Gly Val Glu His Phe Ile Leu Glu Val Ile Gly  
                   110                115                120  
  
 Arg Leu Pro Asp Met Glu Met Val Ile Asn Val Arg Asp Tyr Pro  
                   125                130                135  
  
 Gln Val Pro Lys Trp Met Glu Pro Ala Ile Pro Val Phe Ser Phe  
                   140                145                150  
  
 Ser Lys Thr Ser Glu Tyr His Asp Ile Met Tyr Pro Ala Trp Thr  
                   155                160                165  
  
 Phe Trp Glu Gly Gly Pro Ala Val Trp Pro Ile Tyr Pro Thr Gly  
                   170                175                180  
  
 Leu Gly Arg Trp Asp Leu Phe Arg Glu Asp Leu Val Arg Ser Ala  
                   185                190                195  
  
 Ala Gln Trp Pro Trp Lys Lys Asn Ser Thr Ala Tyr Phe Arg  
                   200                205                210  
  
 Gly Ser Arg Thr Ser Pro Glu Arg Asp Pro Leu Ile Leu Leu Ser  
                   215                220                225  
  
 Arg Lys Asn Pro Lys Leu Val Asp Ala Glu Tyr Thr Lys Asn Gln  
                   230                235                240  
  
 Ala Trp Lys Ser Met Lys Asp Thr Leu Gly Lys Pro Ala Ala Lys  
                   245                250                255  
  
 Asp Val His Leu Val Asp His Cys Lys Tyr Lys Tyr Leu Phe Asn  
                   260                265                270  
  
 Phe Arg Gly Val Ala Ala Ser Phe Arg Phe Lys His Leu Phe Leu  
                   275                280                285  
  
 Cys Gly Ser Leu Val Phe His Val Gly Asp Glu Trp Leu Glu Phe  
                   290                295                300  
  
 Phe Tyr Pro Gln Leu Lys Pro Trp Val His Tyr Ile Pro Val Lys

305	310	315
Thr Asp Leu Ser Asn Val Gln Glu Leu	Leu Gln Phe Val Lys Ala	
320	325	330
Asn Asp Asp Val Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln Phe	
335	340	345
Ile Arg Asn His Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp Glu	
350	355	360
Asn Leu Leu Ser Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val Thr	
365	370	375
Arg Arg Lys Gly Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys Thr	
380	385	390
Glu Leu		

<210> 206  
<211> 1425  
<212> DNA  
<213> Homo sapiens

<400> 206  
caccctcca ttttcgcca tggccctgc actgctcctg atccctgctg 50  
ccctcgccctc tttcatcctg gccttggca ccggagtggaa gttcgtgcgc 100  
tttacctccc ttccggccact tcttggaggg atcccgagt ctggtggtcc 150  
ggatgcccgc caggatggc tggctgcct gcaggaccgc agcatccttgc 200  
ccccctggc atggatctg gggctcctgc ttctatttgc tggcagcac 250  
agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtactttgg 300  
ggtccttcag aggtcactgt atgtggcctg cactgcctg gccttgcagc 350  
tggtgatgcg gtactggag cccataccca aaggccctgt gttgtggag 400  
gctcgggctg agccatgggc cacctgggtg ccgctcctct gctttgtgct 450  
ccatgtcatc tcctggctcc tcatcttag catccttctc gtctttgact 500  
atgctgagct catggccctc aaacaggtat actaccatgt gctgggctg 550  
ggcgagccctc tggccctgaa gtctcccg gctctcagac tcttctccca 600  
cctgcgccac ccagtgtgtg tggagctgct gacagtgtg tgggtggc 650  
ctaccctggg cacggaccgt ctcccttgc ctttcctct tacccctctac 700  
ctgggcctgg ctcacggct tgatcagcaa gacctccgct acctccggc 750  
ccagctacaa agaaaactcc acctgctctc tcggccccag gatggggagg 800

cagagtgagg agctcaactct ggttacaagc cctgttcttc ctctccact 850  
gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900  
caaatccatg gactgaagga gatgcccott ctactacttg agactttatt 950  
ctctgggtcc agctccatac cctaaattct gagttcagc cactgaactc 1000  
caaggtccac ttctcaccag caaggaagag tgggttatgg aagtcatctg 1050  
tcccttcaact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100  
aaggaaagga tctgccctga ccactcccct ggcactgtta cttgcctctg 1150  
cgccctcaggg gtccccttct gcaccgctgg cttccactcc aagaagggtgg 1200  
accagggtct gcaagttcaa cggtcatagc tgtccctcca ggcccccaacc 1250  
ttgcctcacc actccggcc ctatctctg cacccctta ggccctgcct 1300  
ctgggctcag accccaacct agtcaagggg attctcctgc tcttaactcg 1350  
atgacttggg gctccctgct ctcccgagga agatgctctg cagaaaaata 1400  
aaagtcagcc ttttctaaa aaaaa 1425

<210> 207  
<211> 262  
<212> PRT  
<213> Homo sapiens

<400> 207  
Met Ala Pro Ala Leu Leu Ile Pro Ala Ala Leu Ala Ser Phe  
1 5 10 15  
Ile Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser  
20 25 30  
Leu Arg Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp  
35 40 45  
Ala Arg Gln Gly Trp Leu Ala Ala Leu Gln Asp Arg Ser Ile Leu  
50 55 60  
Ala Pro Leu Ala Trp Asp Leu Gly Leu Leu Leu Phe Val Gly  
65 70 75  
Gln His Ser Leu Met Ala Ala Glu Arg Val Lys Ala Trp Thr Ser  
80 85 90  
Arg Tyr Phe Gly Val Leu Gln Arg Ser Leu Tyr Val Ala Cys Thr  
95 100 105  
Ala Leu Ala Leu Gln Leu Val Met Arg Tyr Trp Glu Pro Ile Pro  
110 115 120  
Lys Gly Pro Val Leu Trp Glu Ala Arg Ala Glu Pro Trp Ala Thr  
125 130 135

Trp Val Pro Leu Leu Cys Phe Val Leu His Val Ile Ser Trp Leu  
 140 145 150  
 Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr Ala Glu Leu Met  
 155 160 165  
 Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly Leu Gly Glu Pro  
 170 175 180  
 Leu Ala Leu Lys Ser Pro Arg Ala Leu Arg Leu Phe Ser His Leu  
 185 190 195  
 Arg His Pro Val Cys Val Glu Leu Leu Thr Val Leu Trp Val Val  
 200 205 210  
 Pro Thr Leu Gly Thr Asp Arg Leu Leu Leu Ala Phe Leu Leu Thr  
 215 220 225  
 Leu Tyr Leu Gly Leu Ala His Gly Leu Asp Gln Gln Asp Leu Arg  
 230 235 240  
 Tyr Leu Arg Ala Gln Leu Gln Arg Lys Leu His Leu Leu Ser Arg  
 245 250 255  
 Pro Gln Asp Gly Glu Ala Glu  
 260

<210> 208  
 <211> 2095  
 <212> DNA  
 <213> Homo sapiens

<400> 208  
 ccgagcacag gagattgcct gcgttagga ggtggctgcg ttgtggaaaa 50  
 agctatcaag gaagaaattg ccaaaccatg tcttttttc tgtttcaga 100  
 gtagttcaca acagatctga gtgtttaat taagcatgga atacagaaaa 150  
 caacaaaaaaaaa cttaagcttt aatttcatct ggaattccac agtttctta 200  
 gctccctgga cccgggtgac ctgttggtc ttcccgtgg ctgctctatc 250  
 acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggtcg 300  
 cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350  
 gagtaggatg tcactgagat ccctcaaattg gagcctcctg ctgctgtcac 400  
 tcctgagttt ctttgtatg tggtaccta gcctccccca ctacaatgtg 450  
 atagaacgctg tgaactggat gtacttctat gagtatgagc cgatttacag 500  
 acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa 550  
 atccatttct ggtcattctg gtgacccccc acccttcaga tgtgaaagcc 600  
 aggccaggcca ttagagttac ttggggtgaa aaaaagtctt ggtggggata 650

tgaggttctt acattttctt tattaggcca agaggctgaa aaggaagaca 700  
aatgttggc attgtcctta gaggatgaac accttcctta tggtgacata 750  
atccgacaag atttttaga cacatataat aacctgaccc tgaaaaccat 800  
tatggcattc aggtggtaa ctgagtttg ccccaatgcc aagtacgtaa 850  
tgaagacaga cactgatgtt ttcatcaata ctggcaattt agtgaagtat 900  
cttttaaacc taaaccactc agagaagttt ttcacagggtt atcctcta 950  
tgataattat tcctatagag gatttacca aaaaacccat atttcttacc 1000  
aggagtatcc tttcaagggtg ttccctccat actgcagtgg gttgggttat 1050  
ataatgtcca gagatttgtt gccaaggatc tatgaaatga tgggtcacgt 1100  
aaaacccatc aagttgaag atgttatgt cgggatctgt ttgaatttat 1150  
taaaagtcaa cattcatatt ccagaagaca caaatcttt cttctata 1200  
agaatccatt tggatgtctg tcaactgaga cgtgtgattt cagcccatgg 1250  
cttttcttcc aaggagatca tcacttttg gcaggtcatg ctaaggaaca 1300  
ccacatgccca ttattaactt cacattctac aaaaagccta gaaggacagg 1350  
ataccttggtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400  
ggaggtcagt gtgctggctt acactgaact gaaactcatg aaaaacccag 1450  
actggagact ggagggttac acttggattt tattagtcag gcccttcaaa 1500  
gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550  
gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600  
ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650  
aacaatgtag agttttatattt attgaacaat gtgtcactt gaaggtttg 1700  
tgtatatctt atgtggatta ccaatttaaa aatatatgtt gttctgtgtc 1750  
aaaaaacttc ttcaactgaa ttatactgaa caaaattttt cctgttttg 1800  
gtcatttata aagtacttca agatgttgcgtt gtatttcaca gttatttata 1850  
tttaaaatata cttcaactttt gtgttttaa atgttttgcgtt gatttcaata 1900  
caagataaaaa aggatagtga atcattctt acatgcaaac attttccagt 1950  
tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000  
cataggtcat tattgcataat cagtaatctc ttggactttt gtaaatatattt 2050  
tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209  
 <211> 331  
 <212> PRT  
 <213> Homo sapiens

<400> 209  
 Met Ala Ser Ala Leu Trp Thr Val Leu Pro Ser Arg Met Ser Leu  
 1 5 10 15

Arg Ser Leu Lys Trp Ser Leu Leu Leu Ser Leu Leu Ser Phe  
 20 25 30

Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu  
 35 40 45

Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg  
 50 55 60

Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His  
 65 70 75

Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp  
 80 85 90

Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys  
 95 100 105

Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln  
 110 115 120

Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp  
 125 130 135

Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp  
 140 145 150

Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp  
 155 160 165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp  
 170 175 180

Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu  
 185 190 195

Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile  
 200 205 210

Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser  
 215 220 225

Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly  
 230 235 240

Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu  
 245 250 255

Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val

260	265	270
Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu		
275	280	285
Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys		
290	295	300
Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu		
305	310	315
Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His		
320	325	330

Tyr

<210> 210  
<211> 745  
<212> DNA  
<213> Homo sapiens

<400> 210  
cctctgtcca ctgcttcgt gaagacaaga tgaagttcac aattgtcttt 50  
gctggacttc ttggagtctt tctagctcct gccctagcta actataatat 100  
caacgtcaat gatgacaaca acaatgctgg aagtggcag cagtcagtga 150  
gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200  
gactcctggaa attccatctg ggattatggaa aatggcttg ctgcaaccag 250  
actcttcaa aagaagacat gcattgtca caaatgaac aaggaagtca 300  
tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350  
ggtaaggggac caggaggacc acctcccaag ggcctgatgt actcagtc 400  
ccccaaacaaa gtcgatgacc tgagcaagtt cgaaaaaaac attgcaaaca 450  
tgtgtcggtt gattccaaca tacatggctg aggagatgca agaggcaagc 500  
ctgtttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550  
ggacatttcc ttctgtggag acacggtgga gaactaaaca atttttaaa 600  
gccactatgg attagtcat ctgaatatgc tgtgcagaaa aaatatggc 650  
tccagtggtt tttaccatgt cattctgaaa ttttctcta ctagttatgt 700  
ttgatttctt taagttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211  
<211> 185  
<212> PRT  
<213> Homo sapiens

<400> 211  
 Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu  
   1              5                 10                 15  
 Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn  
   20             25                 30  
 Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu  
   35             40                 45  
 His Asn Val Ala Asn Val Asp Asn Asn Gly Trp Asp Ser Trp  
   50             55                 60  
 Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu  
   65             70                 75  
 Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val  
   80             85                 90  
 Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys  
   95             100                105  
 Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met  
   110            115                120  
 Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly  
   125            130                135  
 Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala  
   140            145                150  
 Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys  
   155            160                165  
 Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly  
   170            175                180  
 Asp Thr Val Glu Asn  
   185

<210> 212  
 <211> 1706  
 <212> DNA  
 <213> Homo sapiens

<400> 212  
 catttctgaa actaatcgtg tcagaattga ctttgaaaag cattgcttt 50  
 tacagaagta tattaacttt ttaggagtaa tttctagttt ggattgtaat 100  
 atgaaataat ttaaaaggc ttgcgtcata tatagaaaa tcgcataatgg 150  
 tcctagtatt aaattcttat tgcttactga ttttttgag ttaagagttg 200  
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaaga 250  
 ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300

tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350  
gacagtcttc gaaccaatgt gtttgttcga tttcaaccag agactatacg 400  
atgtgcttgc atctacccgg cagcttagagc acttcagatt ccgttgccaa 450  
ctcgccccca ttgggttctt ctttttggta ctacagaaga ggaaatccag 500  
gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550  
tgaattactg gaaaaagaag tagaaaaaaag aaaagtagcc ttacaagaag 600  
ccaaattaaa agcaaaggga ttgaatccgg atggaactcc agcccttca 650  
accctgggtg gattttctcc agcctccaag ccatcatcac caagagaagt 700  
aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750  
aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800  
agaaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtcgatcgag 850  
gtcaagaaca cgatcacgtt ctagatcaca tactccaaga agacactata 900  
ataataggcg gagtcgatct ggaacataca gctcgagatc aagaagcagg 950  
tcccgcagtc acagtgaaag ccctcgaaga catcataatc atggttctcc 1000  
tcacctaag gccaaagcata ccagagatga tttaaaaagt tcaaacagac 1050  
atggtcataa aaggaaaaaa tctcggttctc gatctcagag caagtctcg 1100  
gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150  
ggacaggcgt gaacgatctc gtcctttga gaggtcccat aaaagcaagc 1200  
accatggtgg cagtcgctca ggacatggca ggcacaggcg ctgactttct 1250  
cttccttga gcctgcatca gttctgggtt ttgccttatct acagtgtgat 1300  
gtatggactc aatcaaaaac attaaacgca aactgattag gatttgattt 1350  
cttggaaaccc tctaggtctc tagaacactg aggacagttt cttttgaaaa 1400  
gaactatgtt aatttttttgc cacattaaaa tgccctagca gtatctaatt 1450  
aaaaaccatg gtcaggttca attgtacttt attatagttt tgtattgttt 1500  
attgctataa gaactggagc gtgaattctg taaaaatgta tcttattttt 1550  
atacagataa aattgcagac actgttctat ttaagtgggtt atttgtttaa 1600  
atgatggtga atactttctt aacactgggtt tgtctgcatg tgtaaagatt 1650  
tttacaagga aataaaaatac aaatcttggtt ttttctaaaa aaaaaaaaaa 1700  
aaaagt 1706

<210> 213  
<211> 299  
<212> PRT  
<213> Homo sapiens

<400> 213  
Met Asn Asp Ser Leu Arg Thr Asn Val Phe Val Arg Phe Gln Pro  
1 5 10 15  
Glu Thr Ile Ala Cys Ala Cys Ile Tyr Leu Ala Ala Arg Ala Leu  
20 25 30  
Gln Ile Pro Leu Pro Thr Arg Pro His Trp Phe Leu Leu Phe Gly  
35 40 45  
Thr Thr Glu Glu Ile Gln Glu Ile Cys Ile Glu Thr Leu Arg  
50 55 60  
Leu Tyr Thr Arg Lys Lys Pro Asn Tyr Glu Leu Leu Glu Lys Glu  
65 70 75  
Val Glu Lys Arg Lys Val Ala Leu Gln Glu Ala Lys Leu Lys Ala  
80 85 90  
Lys Gly Leu Asn Pro Asp Gly Thr Pro Ala Leu Ser Thr Leu Gly  
95 100 105  
Gly Phe Ser Pro Ala Ser Lys Pro Ser Ser Pro Arg Glu Val Lys  
110 115 120  
Ala Glu Glu Lys Ser Pro Ile Ser Ile Asn Val Lys Thr Val Lys  
125 130 135  
Lys Glu Pro Glu Asp Arg Gln Gln Ala Ser Lys Ser Pro Tyr Asn  
140 145 150  
Gly Val Arg Lys Asp Ser Lys Arg Ser Arg Asn Ser Arg Ser Ala  
155 160 165  
Ser Arg Ser Arg Ser Arg Thr Arg Ser Arg Ser Arg Ser His Thr  
170 175 180  
Pro Arg Arg His Tyr Asn Asn Arg Arg Ser Arg Ser Gly Thr Tyr  
185 190 195  
Ser Ser Arg Ser Arg Ser Arg Ser His Ser Glu Ser Pro  
200 205 210  
Arg Arg His His Asn His Gly Ser Pro His Leu Lys Ala Lys His  
215 220 225  
Thr Arg Asp Asp Leu Lys Ser Ser Asn Arg His Gly His Lys Arg  
230 235 240  
Lys Lys Ser Arg Ser Arg Ser Gln Ser Lys Ser Arg Asp His Ser  
245 250 255  
Asp Ala Ala Lys Lys His Arg His Glu Arg Gly His His Arg Asp

260

265

270

Arg Arg Glu Arg Ser Arg Ser Phe Glu Arg Ser His Lys Ser Lys  
275 280 285

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg  
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

tgggataaa ggaaaaatgg tcaggtatta atggctaaa gattattgga 50

aggggtttat catttttga anntattcgg gtcanaattg ncttgaaaa 100

gcattgcttt ttacagaaat atattanctt ttttagatcaa tttctagttt 150

ggattgtaat atgaaattat taaaaggc ttgcgtcata tataggaaaa 200

tcgcataatgg tcctagtatt aaattnttta tgcttactga ttttttgag 250

ttaagagttt ttatatgnta gaatatgagg atgtaaat aaataagaga 300

agaaaaaaaga ataaagtaga ttgagtctcc aattttatgt aagcttcaga 350

agaactggtt tgtttacatg caagctata gttgaaatat ttttcaggaa 400

ttacatgaat gacagtcttc gaaccaatgt gtttggcga tttcaaccag 450

agantatagc atgtgcttc atctacctt cagntagagc acttcagatt 500

ccgttgccaa ctngtccccaa ttggtttctt cttttggta ctacagaaga 550

ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaaa 600

agccaaacta tgaattactg gaaaaagaag tagaaaaaaag aaaagttagcc 650

ttacaagaag ccnaattaaa agcaaaggaa ttgaatccgg atgaaactcc 700

agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

ggcacgaggc ctcgtgccaa gcttggcacg agggtgcacc gcgttctgc 50

acgcgtcatg gcggtcctcg gagtacagct ggtggtgacc ctgctcactg 100

ccaccctcat gcacaggctg ggcacacact gtccttcgc ggcgtggctg 150  
ctctgttaacg gcagtttggc ccgataacaag caccgtctg aggaggagct 200  
tcggggccctg gcggggaaagc cgaggcccag aggcaggaaa gagcggtgg 250  
ccaatggcct tagtgaggag aagccactgt ctgtccccg agatgccccg 300  
ttccagctgg agacctgccc ctcacgacc gtggatgccc tggctctcg 350  
cttcttcctg gagtaccagt gggttggc cttgtctgtg tactcggcg 400  
gcgtgtacct ctacacagag gcctactact acatgctggg accagccaag 450  
gagactaaca ttgtgtgtt ctgggtcctg ctcacggta cttctccat 500  
caagatgttc ctgacagtga cacggctgta cttagcgcc gaggaggggg 550  
gtgagcgctc tgtctgcctc acctttgcct tcctcttcct gctgctggcc 600  
atgctggtgc aagtggtgcg ggaggagacc ctggagctgg gcctggagcc 650  
tggctggcc agcatgaccc agaacttaga gccacttctg aagaagcagg 700  
gctgggactg ggcgttcct gtggccaagc tggctatccg cgtgggactg 750  
gcagtggtgg gctctgtgct gggtgcctc ctcaccttc caggcctcg 800  
gctggcccaag acccaccggg acgcactgac catgtcgag gacagaccca 850  
tgctgcagtt ctcctgcac accagcttc tgtctccct gttcatcctg 900  
tggctctgga caaagccat tgcacggac ttctgcacc agccgccgtt 950  
tggggagacg cgtttctccc tgctgtccga ttctgcctc gactctggc 1000  
gcctctgggtt gctgggttg ctgtgcctgc tgccgtggc ggtgacccgg 1050  
ccccacctgc aggccctacct gtgcctggcc aaggccggg tggagcagct 1100  
gcgaagggag gctggccgca tcgaagcccg tgaaatccag cagagggtgg 1150  
tccgagtcta ctgctatgtg accgtggtga gctgcagta cctgacgccc 1200  
ctcatcctca ccctcaactg cacacttctg ctcaagacgc tggaggcta 1250  
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ccagcgctgc ccccatcgcc tctggggagg acgaagtcca gcagactgca 1350  
gchgccgatgg ccggggccct gggtggcctg cttaactcccc tcttcctcag 1400  
tggcgtcctg gcctaccta tctggtgac ggctgcctgc cagctgctcg 1450  
ccagcctttt cggcctctac ttccaccagg acttggcagg ctcctagctg 1500  
cctgcagacc ctccctggggc cctgaggtct gttccctgggg cagcgggaca 1550

ctagcctgcc ccctctgttt gcgcccccgt gtccccagct gcaagggtggg 1600  
gccggactcc ccggcggttcc ctaccacaca gtgcctgacc cgccggccccc 1650  
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atgagggtcc cgaggccatt gtctccgaag cgtatgtgcc aggttgagt 1750  
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tttttaa 1807

<210> 216  
<211> 479  
<212> PRT  
<213> Homo sapiens

<400> 216  
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1 5 10 15  
Thr Leu Met His Arg Leu Ala Pro His Cys Ser Phe Ala Arg Trp  
20 25 30  
Leu Leu Cys Asn Gly Ser Leu Phe Arg Tyr Lys His Pro Ser Glu  
35 40 45  
Glu Glu Leu Arg Ala Leu Ala Gly Lys Pro Arg Pro Arg Gly Arg  
50 55 60  
Lys Glu Arg Trp Ala Asn Gly Leu Ser Glu Glu Lys Pro Leu Ser  
65 70 75  
Val Pro Arg Asp Ala Pro Phe Gln Leu Glu Thr Cys Pro Leu Thr  
80 85 90  
Thr Val Asp Ala Leu Val Leu Arg Phe Phe Leu Glu Tyr Gln Trp  
95 100 105  
Phe Val Asp Phe Ala Val Tyr Ser Gly Gly Val Tyr Leu Phe Thr  
110 115 120  
Glu Ala Tyr Tyr Tyr Met Leu Gly Pro Ala Lys Glu Thr Asn Ile  
125 130 135  
Ala Val Phe Trp Cys Leu Leu Thr Val Thr Phe Ser Ile Lys Met  
140 145 150  
Phe Leu Thr Val Thr Arg Leu Tyr Phe Ser Ala Glu Glu Gly Gly  
155 160 165  
Glu Arg Ser Val Cys Leu Thr Phe Ala Phe Leu Phe Leu Leu Leu  
170 175 180  
Ala Met Leu Val Gln Val Val Arg Glu Glu Thr Leu Glu Leu Gly  
185 190 195  
Leu Glu Pro Gly Leu Ala Ser Met Thr Gln Asn Leu Glu Pro Leu

200	205	210
Leu Lys Lys Gln Gly Trp Asp Trp Ala	Leu Pro Val Ala Lys Leu	
215	220	225
Ala Ile Arg Val Gly Leu Ala Val Val	Gly Ser Val Leu Gly Ala	
230	235	240
Phe Leu Thr Phe Pro Gly Leu Arg Leu	Ala Gln Thr His Arg Asp	
245	250	255
Ala Leu Thr Met Ser Glu Asp Arg Pro	Met Leu Gln Phe Leu Leu	
260	265	270
His Thr Ser Phe Leu Ser Pro Leu Phe	Ile Leu Trp Leu Trp Thr	
275	280	285
Lys Pro Ile Ala Arg Asp Phe Leu His	Gln Pro Pro Phe Gly Glu	
290	295	300
Thr Arg Phe Ser Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly Arg	
305	310	315
Leu Trp Leu Leu Val Val Leu Cys Leu	Leu Arg Leu Ala Val Thr	
320	325	330
Arg Pro His Leu Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg Val	
335	340	345
Glu Gln Leu Arg Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu Ile	
350	355	360
Gln Gln Arg Val Val Arg Val Tyr Cys	Tyr Val Thr Val Val Ser	
365	370	375
Leu Gln Tyr Leu Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr Leu	
380	385	390
Leu Leu Lys Thr Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro Ala	
395	400	405
Pro Leu Leu Ser Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro Ile	
410	415	420
Gly Ser Gly Glu Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile Ala	
425	430	435
Gly Ala Leu Gly Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly Val	
440	445	450
Leu Ala Tyr Leu Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu Ala	
455	460	465
Ser Leu Phe Gly Leu Tyr Phe His Gln His	Leu Ala Gly Ser	
470	475	

<210> 217

<211> 574

<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 5, 146  
<223> unknown base

<400> 217  
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gctggctgct ctgtaacggc agtttgttcc gatacaagca cccgtnttga 150  
ggaggagctt cgggcccctgg cggggaagcc gaggcccaga ggcagggaaag 200  
agcggtgtggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250  
gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgcct 300  
ggtcctgcgc ttcttcctgg agtaccagtg gtttgtggac tttgctgtgt 350  
actcgggcgg cgtgtacctc ttcacagagg cctactacta catgctggga 400  
ccagccaagg agactaacat tgctgtttc tggtgccctgc tcacagtgac 450  
cttctccatc aagatgttcc tgacagtgac acggctgtac ttcagcgccg 500  
aggaggggggg tgagcgctct gtctgcctca cctttgcctt cctcttcctg 550  
ctgctggcca tgctggtgca agcg 574

<210> 218  
<211> 2571  
<212> DNA  
<213> Homo sapiens

<400> 218  
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tttgtatcta ctgattgtgg gggcatggca aggttgctt aaaggagctt 150  
ggctggtttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200  
cacactgctc ggagaatgaa ggcgcttctg ttgctggct tgcctggct 250  
cagtcctgct aactacattg acaatgtggg caacctgcac ttccctgtatt 300  
cagaactctg taaaggtgcc tcccactacg gcctgaccaa agataggaag 350  
aggcgctcac aagatggctg tccagacggc tggcgagcc tcacagccac 400  
ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450  
acgagcctgg cctagacaac cctgcctacg tgcctcgac agaggacggg 500

cagccagcaa tcagcccagt ggactctggc cgagcaacc gaactagggc 550  
acggccctt gagagatcca ctattagaag cagatcattt aaaaaataa 600  
atcgagctt gagtttctt cgaaggacaa agagcggag tgcagttgcc 650  
aaccatgccg accagggcag gaaaaattct gaaaacacca ctgcccctga 700  
agtcttcca aggttgtacc acctgattcc agatggtaa attaccagca 750  
tcaagatcaa tcgagtagat cccagtgaaa gcctcttat taggctggtg 800  
ggaggttagcg aaaccccact ggtccatatac attatccaaac acatttatcg 850  
tgcgtgggtg atcgccagag acggccggct actgccagga gacatcattc 900  
taaaggtcaa cggatggac atcagcaatg tccctcacaa ctacgctgtg 950  
cgtctcctgc ggcagccctg ccaggtgctg tggctgactg tgatgcgtga 1000  
acagaagttc cgcagcagga acaatggaca ggccccggat gcctacagac 1050  
cccgagatga cagtttcat gtgattctca acaaaagtag ccccgaggag 1100  
cagttggaa taaaactggt ggcaggtg gatgagcctg ggttttcat 1150  
cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagttgagg 1200  
agaatgaccg tgtgttagcc atcaatggac atgatctcg atatggcagc 1250  
ccagaaagtg cggctcatct gattcaggcc agtcaaagac gtgttcacct 1300  
cgtcgtgtcc cgccaggttc ggcagcggag ccctgacatc ttccaggaag 1350  
ccggctggaa cagcaatggc agctggtccc cagggccagg ggagaggagc 1400  
aacactccca agccctcca tcctacaatt acttgtcatg agaaggtggt 1450  
aaatatccaa aaagaccccg gtgaatctct cggcatgacc gtcgcagggg 1500  
gagcatcaca tagagaatgg gatttgccta tctatgtcat cagtgttgag 1550  
cccgaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600  
gttgaatgtg gatgggtcg aactgacaga ggtcagccgg agtgaggcag 1650  
tggcattatt gaaaagaaca tcatcctcga tagtactcaa agctttggaa 1700  
gtcaaagagt atgagccca ggaagactgc agcagcccag cagccctgga 1750  
ctccaaccac aacatggccc cacccagtga ctggccccca tcctgggtca 1800  
tgtggctgga attaccacgg tgcttgtata actgtaaaga tattgtatta 1850  
cgaagaaaca cagctggaag tctggcttc tgcattgtag gaggttatga 1900  
agaatacaat ggaacaaac ctttttcat caaatccatt gttgaaggaa 1950

caccagcata caatgatgga agaatttagat gtgggtatat tcttcttgct 2000  
gtcaatggta gaagtacatc aggaatgata catgtttgct tggcaagact 2050  
gctgaaagaa cttaaaggaa gaattactct aactattgtt tcttggcctg 2100  
gcacttttt atagaatcaa tgatgggtca gagaaaaaca gaaaaatcac 2150  
aaataggcta agaaggtaa acactatatt tatcttgtca gtttttatat 2200  
ttaaagaaaag aatacattgt aaaaatgtca ggaaaagtat gatcatctaa 2250  
tcaaagccag ttacacctca gaaaatatga ttccaaaaaaaa attaaaacta 2300  
ctagttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350  
atatttttc tattcaataa aaagccctaa aacaactaaa atgattgatt 2400  
tgtatacccc actgaattca agctgattta aatttaaat ttggtatatg 2450  
ctgaagtctg ccaagggtac attatggcca ttttaattt acagctaaaa 2500  
tatttttaa aatgcattgc tgagaaacgt tgcttcatc aaacaagaat 2550  
aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met	Lys	Ala	Leu	Leu	Leu	Leu	Val	Leu	Pro	Trp	Leu	Ser	Pro	Ala
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Asn	Tyr	Ile	Asp	Asn	Val	Gly	Asn	Leu	His	Phe	Leu	Tyr	Ser	Glu
					20				25					30

Leu	Cys	Lys	Gly	Ala	Ser	His	Tyr	Gly	Leu	Thr	Lys	Asp	Arg	Lys
									35	40				45

Arg	Arg	Ser	Gln	Asp	Gly	Cys	Pro	Asp	Gly	Cys	Ala	Ser	Leu	Thr
							50		55					60

Ala	Thr	Ala	Pro	Ser	Pro	Glu	Val	Ser	Ala	Ala	Ala	Thr	Ile	Ser
								65				70		75

Leu	Met	Thr	Asp	Glu	Pro	Gly	Leu	Asp	Asn	Pro	Ala	Tyr	Val	Ser
								80		85				90

Ser	Ala	Glu	Asp	Gly	Gln	Pro	Ala	Ile	Ser	Pro	Val	Asp	Ser	Gly
								95		100				105

Arg	Ser	Asn	Arg	Thr	Arg	Ala	Arg	Pro	Phe	Glu	Arg	Ser	Thr	Ile
								110		115				120

Arg	Ser	Arg	Ser	Phe	Lys	Lys	Ile	Asn	Arg	Ala	Leu	Ser	Val	Leu
								125		130				135

Arg Arg Thr Lys Ser Gly Ser Ala Val Ala Asn His Ala Asp Gln  
 140 145 150  
 Gly Arg Glu Asn Ser Glu Asn Thr Thr Ala Pro Glu Val Phe Pro  
 155 160 165  
 Arg Leu Tyr His Leu Ile Pro Asp Gly Glu Ile Thr Ser Ile Lys  
 170 175 180  
 Ile Asn Arg Val Asp Pro Ser Glu Ser Leu Ser Ile Arg Leu Val  
 185 190 195  
 Gly Gly Ser Glu Thr Pro Leu Val His Ile Ile Ile Gln His Ile  
 200 205 210  
 Tyr Arg Asp Gly Val Ile Ala Arg Asp Gly Arg Leu Leu Pro Gly  
 215 220 225  
 Asp Ile Ile Leu Lys Val Asn Gly Met Asp Ile Ser Asn Val Pro  
 230 235 240  
 His Asn Tyr Ala Val Arg Leu Leu Arg Gln Pro Cys Gln Val Leu  
 245 250 255  
 Trp Leu Thr Val Met Arg Glu Gln Lys Phe Arg Ser Arg Asn Asn  
 260 265 270  
 Gly Gln Ala Pro Asp Ala Tyr Arg Pro Arg Asp Asp Ser Phe His  
 275 280 285  
 Val Ile Leu Asn Lys Ser Ser Pro Glu Glu Gln Leu Gly Ile Lys  
 290 295 300  
 Leu Val Arg Lys Val Asp Glu Pro Gly Val Phe Ile Phe Asn Val  
 305 310 315  
 Leu Asp Gly Gly Val Ala Tyr Arg His Gly Gln Leu Glu Glu Asn  
 320 325 330  
 Asp Arg Val Leu Ala Ile Asn Gly His Asp Leu Arg Tyr Gly Ser  
 335 340 345  
 Pro Glu Ser Ala Ala His Leu Ile Gln Ala Ser Glu Arg Arg Val  
 350 355 360  
 His Leu Val Val Ser Arg Gln Val Arg Gln Arg Ser Pro Asp Ile  
 365 370 375  
 Phe Gln Glu Ala Gly Trp Asn Ser Asn Gly Ser Trp Ser Pro Gly  
 380 385 390  
 Pro Gly Glu Arg Ser Asn Thr Pro Lys Pro Leu His Pro Thr Ile  
 395 400 405  
 Thr Cys His Glu Lys Val Val Asn Ile Gln Lys Asp Pro Gly Glu  
 410 415 420  
 Ser Leu Gly Met Thr Val Ala Gly Gly Ala Ser His Arg Glu Trp

425	430	435
Asp Leu Pro Ile Tyr Val Ile Ser Val Glu Pro Gly Gly Val Ile		
440	445	450
Ser Arg Asp Gly Arg Ile Lys Thr Gly Asp Ile Leu Leu Asn Val		
455	460	465
Asp Gly Val Glu Leu Thr Glu Val Ser Arg Ser Glu Ala Val Ala		
470	475	480
Leu Leu Lys Arg Thr Ser Ser Ile Val Leu Lys Ala Leu Glu		
485	490	495
Val Lys Glu Tyr Glu Pro Gln Glu Asp Cys Ser Ser Pro Ala Ala		
500	505	510
Leu Asp Ser Asn His Asn Met Ala Pro Pro Ser Asp Trp Ser Pro		
515	520	525
Ser Trp Val Met Trp Leu Glu Leu Pro Arg Cys Leu Tyr Asn Cys		
530	535	540
Lys Asp Ile Val Leu Arg Arg Asn Thr Ala Gly Ser Leu Gly Phe		
545	550	555
Cys Ile Val Gly Gly Tyr Glu Glu Tyr Asn Gly Asn Lys Pro Phe		
560	565	570
Phe Ile Lys Ser Ile Val Glu Gly Thr Pro Ala Tyr Asn Asp Gly		
575	580	585
Arg Ile Arg Cys Gly Asp Ile Leu Leu Ala Val Asn Gly Arg Ser		
590	595	600
Thr Ser Gly Met Ile His Ala Cys Leu Ala Arg Leu Leu Lys Glu		
605	610	615
Leu Lys Gly Arg Ile Thr Leu Thr Ile Val Ser Trp Pro Gly Thr		
620	625	630
Phe Leu		

<210> 220  
 <211> 773  
 <212> DNA  
 <213> Homo sapiens

<400> 220  
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 aggatagaag ctgcacaggg cagctttact tactccagca ctttcctctc 100  
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150  
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200

agtgacaatt gataatgaaa aaaataccgc catcgtaac atccatgcag 250  
gatcatgctc ttctaccaca attttgact ataaacatgg ctacattgca 300  
tccagggtgc tctccgaag agcctgctt atcctgaaga tggaccatca 350  
gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400  
ctctggacaa catgttctcc aacaaataca cctgggtcaa gtacaaccct 450  
ctggagtctc tgatcaaaga cgtggattgg ttcctgcttg ggtcacccat 500  
tgagaaactc tgcaaacata tcccttgta taaggggaa gtggttgaaa 550  
acacacataa tgtcggtgct ggaggctgtg caaaggctgg gtcctggc 600  
atcttggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650  
ctcttggaa atctttcaa agaaatacat cttggttta cactcaaaag 700  
tcaaattaaa ttcttccca atgccccaac taattttag attcagtcag 750  
aaaatataaa tgctgtattt ata 773

<210> 221  
<211> 184  
<212> PRT  
<213> Homo sapiens

<400> 221  
Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly  
1 5 10 15  
Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser  
20 25 30  
Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu  
35 40 45  
Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser  
50 55 60  
Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val  
65 70 75  
Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn  
80 85 90  
Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln  
95 100 105  
Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr  
110 115 120  
Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu  
125 130 135  
Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys

140                    145                    150  
Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys  
155                    160                    165  
Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala  
170                    175                    180  
Asp Ile His Val

<210> 222  
<211> 992  
<212> DNA  
<213> Homo sapiens

<400> 222  
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acccaccgag gcatggggct ccctgggctg ttctgcttgg ccgtgctggc 100  
tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150  
ccattgccta caaagtccctg gaagtttcc ccaaaggccg ctgggtgctc 200  
ataacctgct gtgcacccca gccaccacccg cccatcacct attccctctg 250  
tggAACCAAG aacatcaagg tggccaagaa ggtggtaag acccacgagc 300  
cggcctcctt caacctcaac gtcacactca agtccagtcc agacctgctc 350  
acctacttct gccgggcgtc ctccacactca ggtgccatg tggacagtgc 400  
caggctacag atgcactggg agctgtggc caagccagtg tctgagctgc 450  
gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500  
atctgccagg cgtcctcggg cagcccaccc atcaccaaca gcctgatcgg 550  
gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600  
ccaacttctc cttcctgccc agccagacat cgactggtt ctgggtgccag 650  
gctgcaaaca acgccaatgt ccagcacagc gccctcacag tgggcccccc 700  
agggtggtgcac cagaagatgg aggactggca gggccctg gagagcccc 750  
tccttgcctt gccgctctac aggagcaccc gccgtctgag tgaagaggag 800  
tttggggggt tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850  
agccatgttag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900  
ggccatcagc gtgcactgtt cgtatggaa gttcatgcaa aatgagtg 950  
tttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265  
<212> PRT  
<213> Homo sapiens

<400> 223  
Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser  
1 5 10 15  
Ser Phe Ser Lys Ala Arg Glu Glu Ile Thr Pro Val Val Ser  
20 25 30  
Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val  
35 40 45  
Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr  
50 55 60  
Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val  
65 70 75  
Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys  
80 85 90  
Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr  
95 100 105  
Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu  
110 115 120  
Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu  
125 130 135  
Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala  
140 145 150  
Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp  
155 160 165  
Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala  
170 175 180  
Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys  
185 190 195  
Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val  
200 205 210  
Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro  
215 220 225  
Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg  
230 235 240  
Arg Leu Ser Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly  
245 250 255  
Glu Val Arg Gly Arg Lys Ala Ala Met  
260 265

<210> 224  
<211> 1297  
<212> DNA  
<213> Homo sapiens

<400> 224  
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ctctcttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150  
ggtgtgtgc gttcaaggc caggtggatg aaaagacttt tcttcactat 200  
gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250  
aaatgtcaca acggcctgga aagcacagaa cccagtactg agagaggtgg 300  
tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350  
cccaaggaac ccctcaccct gcaggcaagg atgtcttgc agcagaaagc 400  
tgaaggacac agcagtggat cttggcagtt cagtttcgtat gggcagatct 450  
tcctccttgc tgactcagag aagagaatgt ggacaacggc tcattcctgga 500  
gccagaaaga tgaaagaaaa gtgggagaat gacaagggtt tggccatgtc 550  
cttccattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600  
tgatggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650  
atgtcctcag gcacaaccca actcagggcc acagccacca ccctcatcct 700  
ttgctgcctc ctcatcatcc tcccctgctt catcctccct ggcatctgag 750  
gagagtccct tagagtgaca ggttaaagct gataaaaaa ggctcctgtg 800  
agcacggct tgatcaaact cgcccttctg tctggccagc tgcccacgac 850  
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900  
ccaatagctc attcaactgccc ttgattccctt ttgccaacaa ttttaccagc 950  
agttataacct aacatattat gcaattttctt cttggtgcta cctgatggaa 1000  
ttcctgcact taaagttctg gctgactaaa caagatataat cattttctt 1050  
cttctctttt tgtttggaaa atcaagtact tctttgaatg atgatctctt 1100  
tcttgcaaat gatattgtca gtaaaataat cacgttagac ttcagaccc 1150  
tggggattct ttccgtgtcc tgaaagagaa tttttaattt atttaataag 1200  
aaaaaattta tattaatgat tgtttcctt agtaatttat tgttctgtac 1250  
tgatatttaa ataaagagtt ctatccca aaaaaaaaaa aaaaaaaaa 1297

<210> 225  
<211> 246  
<212> PRT  
<213> Homo sapiens

<400> 225  
Met Ala Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu  
1 5 10 15  
  
Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro  
20 25 30  
  
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro  
35 40 45  
  
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr  
50 55 60  
  
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser  
65 70 75  
  
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln  
80 85 90  
  
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu  
95 100 105  
  
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr  
110 115 120  
  
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser  
125 130 135  
  
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu  
140 145 150  
  
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala  
155 160 165  
  
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met  
170 175 180  
  
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu  
185 190 195  
  
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly  
200 205 210  
  
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr  
215 220 225  
  
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys  
230 235 240  
  
Phe Ile Leu Pro Gly Ile  
245

<210> 226

<211> 735  
<212> DNA  
<213> Homo sapiens

<400> 226  
gggaaagcca tttcgaaaac ccatctatac aaactatata ttttcatttc 50  
tgctgcttagc tgccctgggc ctcacaattt tcattctgtt ttctgacttt 100  
caagttatat accgttggaat ggagttgatc ccaaccataa catcgtggag 150  
ggtttaatt ttgggtggtag ccctcaccca attctggtgt ggcttcttt 200  
gcagaggatt ccaccccaa aatcatgaac tctggctgtt gatcaaaaaga 250  
gaatttggat tctactctaa aagtcaatat aggacttggc aaaagaagct 300  
agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350  
atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400  
attccaaaaaa gaaaactcaa attgggaggc caacccacag aacagcattt 450  
ctgggccagg ctgtaatcag aattgtcgac gtacatgctc aacagcattt 500  
ctttttccc caaaattaac acattgtgga gaagtgtatga tactctcccc 550  
ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600  
aacaccttgc gcaagggacc ttagataggc ttattctgac tgtatgcttt 650  
accaatgaga gaaaaaaaaatg catttcctgt atcatccttt tcaataaact 700  
gtattcattt tgaaaaaaaaaaaaaaaaaaaa 735

<210> 227  
<211> 115  
<212> PRT  
<213> Homo sapiens

<400> 227  
Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu  
1 5 10 15  
Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly  
20 25 30  
Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu  
35 40 45  
Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys  
50 55 60  
Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr  
65 70 75  
Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu  
80 85 90

Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln  
95 100 105

Pro Thr Glu Gln His Phe Trp Ala Arg Leu  
110 115

<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

gttctccttt ccgagccaaa atcccaggcg atggtaatt atgaacgtgc 50

cacaccatga agctcttgtg gcaggtaact gtgcaccacc acacctggaa 100

tgcacatcctg ctccccgtcg tctacctcac ggcaaggta tggattctgt 150

gtgcagccat cgctgctgcc gcctcagccg ggccccagaa ctgcacccctcc 200

gtttgctcgt gcagtaacca gttcagcaag gtgggtgcg cgcgcgggg 250

cctctccgag gtcccgagg gtattccctc gaacacccgg tacctaacc 300

tcatggagaa caacatccag atgatccagg ccgacacccctc 350

caccacctgg aggtcctgca gttggcagg aactccatcc ggcagattga 400

ggtgggggcc ttcaacggcc tggccagcct caacaccctg gagctgtcg 450

acaactggct gacagtcatc cctagcgggg cctttgaata cctgtccaag 500

ctgcgggagc tctggctcg caacaacccc atcgaaagca tcccccttta 550

cgccttcaac cgggtgcct ccctcatgcg cctggacttg ggggagctca 600

agaagctgga gtatatctct gagggagctt ttgaggggct gttcaaccc 650

aagtatctga acttggcat gtcaacatt aaagacatgc ccaatctcac 700

ccccctggtg gggctggagg agctggagat gtcaggaaac cacttcctg 750

agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800

gtcatgaact cacaggtcag cctgatttag cgaaatgctt ttgacggct 850

ggcttcactt gtggactca acttggccca caataacccctc tcttctttgc 900

cccatgacct cttaaccccg ctgaggtacc tggggagtt gcatctacac 950

cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctggggct 1000

tcgagagtat atacccacca attccacccg ctgtggccgc tgtcatgctc 1050

ccatgcacat gcgaggccgc tacctcgatgg aggtggacca ggcctccttc 1100

cagtgctctg ccccttcat catggacca cctcgagacc tcaacatttc 1150

tgagggtcgg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200  
tgaagtggtt gctgccaaat gggacagtgc tcagccacgc ctcccgcac 1250  
ccaaggatct ctgtcctcaa cgacggcacc ttgaacttt cccacgtgct 1300  
gcttcagac actgggtgt acacatgcat ggtgaccaat gttgcaggca 1350  
actccaacgc ctccgcctac ctcaatgtga gcacggctga gcttaacacc 1400  
tccaactaca gcttcttac cacagtaaca gtggagacca cggagatctc 1450  
gcctgaggac acaacgcgaa agtacaagcc tgttcctacc acgtccactg 1500  
gttaccagcc ggcataatacc acctctacca cggtgctcat tcagactacc 1550  
cgtgtgccca agcaggtggc agtaccccg acagacacca ctgacaagat 1600  
gcagaccagc ctggatgaag tcatgaagac caccaagatc atcattggct 1650  
gcttgtggc agtactctg ctagctgccg ccatgttgat tgtcttctat 1700  
aaacttcgta agcggcacca gcagcggagt acagtcacag cggccggac 1750  
tgttgagata atccaggtgg acgaagacat cccagcagca acatccgcag 1800  
cagcaacagc agctccgtcc ggttatcag gtgagggggc agtagtgctg 1850  
cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900  
ggcccactgg acagaaaaca gcctgggaa ctctctgcac cccacagtca 1950  
ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000  
cagggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050  
tagaatgcac acaaagacag caactttgt acagagtggg gagagacttt 2100  
ttcttgata tgcttatata ttaagtctat gggctggta aaaaaaacag 2150  
attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229  
<211> 653  
<212> PRT  
<213> Homo sapiens

<400> 229  
Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn  
1 5 10 15  
Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile  
20 25 30  
Leu Cys Ala Ala Ile Ala Ala Ala Ser Ala Gly Pro Gln Asn  
35 40 45  
Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val

50	55	60
Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser		
65	70	75
Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile		
80	85	90
Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln		
95	100	105
Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn		
110	115	120
Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu		
125	130	135
Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg		
140	145	150
Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr		
155	160	165
Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu		
170	175	180
Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu		
185	190	195
Phe Asn Leu Lys Tyr Leu Asn Leu Gly Met Cys Asn Ile Lys Asp		
200	205	210
Met Pro Asn Leu Thr Pro Leu Val Gly Leu Glu Glu Leu Glu Met		
215	220	225
Ser Gly Asn His Phe Pro Glu Ile Arg Pro Gly Ser Phe His Gly		
230	235	240
Leu Ser Ser Leu Lys Lys Leu Trp Val Met Asn Ser Gln Val Ser		
245	250	255
Leu Ile Glu Arg Asn Ala Phe Asp Gly Leu Ala Ser Leu Val Glu		
260	265	270
Leu Asn Leu Ala His Asn Asn Leu Ser Ser Leu Pro His Asp Leu		
275	280	285
Phe Thr Pro Leu Arg Tyr Leu Val Glu Leu His Leu His His Asn		
290	295	300
Pro Trp Asn Cys Asp Cys Asp Ile Leu Trp Leu Ala Trp Trp Leu		
305	310	315
Arg Glu Tyr Ile Pro Thr Asn Ser Thr Cys Cys Gly Arg Cys His		
320	325	330
Ala Pro Met His Met Arg Gly Arg Tyr Leu Val Glu Val Asp Gln		
335	340	345

Ala Ser Phe Gln Cys Ser Ala Pro Phe Ile Met Asp Ala Pro Arg  
                   350                     355                 360  
  
 Asp Leu Asn Ile Ser Glu Gly Arg Met Ala Glu Leu Lys Cys Arg  
                   365                     370                 375  
  
 Thr Pro Pro Met Ser Ser Val Lys Trp Leu Leu Pro Asn Gly Thr  
                   380                     385                 390  
  
 Val Leu Ser His Ala Ser Arg His Pro Arg Ile Ser Val Leu Asn  
                   395                     400                 405  
  
 Asp Gly Thr Leu Asn Phe Ser His Val Leu Leu Ser Asp Thr Gly  
                   410                     415                 420  
  
 Val Tyr Thr Cys Met Val Thr Asn Val Ala Gly Asn Ser Asn Ala  
                   425                     430                 435  
  
 Ser Ala Tyr Leu Asn Val Ser Thr Ala Glu Leu Asn Thr Ser Asn  
                   440                     445                 450  
  
 Tyr Ser Phe Phe Thr Thr Val Thr Val Glu Thr Thr Glu Ile Ser  
                   455                     460                 465  
  
 Pro Glu Asp Thr Thr Arg Lys Tyr Lys Pro Val Pro Thr Thr Ser  
                   470                     475                 480  
  
 Thr Gly Tyr Gln Pro Ala Tyr Thr Thr Ser Thr Thr Val Leu Ile  
                   485                     490                 495  
  
 Gln Thr Thr Arg Val Pro Lys Gln Val Ala Val Pro Ala Thr Asp  
                   500                     505                 510  
  
 Thr Thr Asp Lys Met Gln Thr Ser Leu Asp Glu Val Met Lys Thr  
                   515                     520                 525  
  
 Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Val Thr Leu Leu Ala  
                   530                     535                 540  
  
 Ala Ala Met Leu Ile Val Phe Tyr Lys Leu Arg Lys Arg His Gln  
                   545                     550                 555  
  
 Gln Arg Ser Thr Val Thr Ala Ala Arg Thr Val Glu Ile Ile Gln  
                   560                     565                 570  
  
 Val Asp Glu Asp Ile Pro Ala Ala Thr Ser Ala Ala Ala Thr Ala  
                   575                     580                 585  
  
 Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val Val Leu Pro Thr  
                   590                     595                 600  
  
 Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro Ala His Gly  
                   605                     610                 615  
  
 Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His Pro Thr  
                   620                     625                 630  
  
 Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr Lys

635

640

645

Asp Lys Val Gln Glu Thr Gln Ile  
650

<210> 230

<211> 2846

<212> DNA

<213> Homo sapiens

<400> 230

cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50

tggggctcac ttttcttcag ctccttctca tctcgtcctt gccaaagagag 100

tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150

tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200

gggaagtcgt gggttataacc atcccttgct gcaggaatga ggagaatgag 250

tgtgactcct gcctgatcca cccaggttgt accatcttg aaaactgcaa 300

gagctgccga aatggctcat gggggggtagt cttggatgac ttctatgtga 350

aggggttcta ctgtgcagag tgccgagcag gctggtaggg aggagactgc 400

atgcgatgtg gccaggttct gcgagcccc aagggtcaga ttttgttgg 450

aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500

ggtttgcata ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550

atgtgccagt atgactatgt tgagggttgt gatggagaca accgcgatgg 600

ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcactccac gtcctttcc actccgatgg ctccaagaat 700

tttgacgggtt tccatgccat ttatgaggag atcacagcat gctcctcatac 750

cccttgggtt catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800

agtgtgcctg cttggcaggc tatactgggc agcgtgtga aaatctcctt 850

gaagaaaagaa actgctcaga ccctggggc ccagtcaatg ggtaccagaa 900

aataacaggg ggccctgggc ttatcaacgg acgccatgct aaaattggca 950

ccgtgggtgc ttttttttgt aacaactcct atgttcttag tggcaatgag 1000

aaaagaactt gccagcagaa tggagagtgg tcagggaaac agcccatctg 1050

cataaaagcc tgccgagaac caaagattc agacctggtg agaaggagag 1100

ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150

tcagcggcct tcagcaagca gaaactgcag agtgccccta ccaagaagcc 1200

agcccttccc tttggagatc tgcccatggg ataccaacat ctgcataccc 1250  
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aggaggacat gtctgaggac tggaaagtgg agtgggcggg caccatcctg 1350  
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ggttgcgtcg gccgtggcag gcagccatct acaggaggac cagcgggtg 1450  
catgacggca gcctacacaa gggagcgtgg ttcctagtct gcagcgggtgc 1500  
cctggtaat gagcgcactg tgggtgtggc tgccactgt gttactgacc 1550  
tggggaaaggc caccatgatc aagacagcag acctgaaagt tgaaaaaaa 1600  
aaattctacc gggatgatga ccggatgag aagaccatcc agagcctaca 1650  
gatttctgct atcattctgc atcccaacta tgacccatc ctgcttgatg 1700  
ctgacatcgc catcctgaag ctcctagaca aggccgtat cagcacccga 1750  
gtccagccca tctgcctcgc tgccagtcgg gatctcagca cttcccttcca 1800  
ggagtcccac atcactgtgg ctggctggaa tgtcctggca gacgtgagga 1850  
gccctggctt caagaacgac acactgcgt ctgggtggc cagtgtggc 1900  
gactcgctgc tgtgtgagga gcagcatgag gaccatggca tcccagttag 1950  
tgtcactgat aacatgttct gtgccagctg ggaacccact gccccttctg 2000  
atatctgcac tgcagagaca ggaggcatcg cggctgtgtc cttcccgaaa 2050  
cgagcatctc ctgagccacg ctggcatctg atggactgg tcagctggag 2100  
ctatgataaa acatgcagcc acaggctctc cactgccttc accaagggtgc 2150  
tgcctttaa agactggatt gaaagaaaata tgaaatgaac catgctcatg 2200  
caactccttga gaagtgttcc tgttatatccg tctgtacgtg tgtcattgc 2250  
tgaagcagtg tggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300  
cagggcttct gacttcaggg acaaaaactca gtgaagggtg agtagacctc 2350  
cattgctggc aggctgatgc cgccgtccact actaggacag ccaattggaa 2400  
gatgccaggg cttgcaagaa gtaagttct tcaaagaaga ccatatacaa 2450  
aacctctcca ctccactgac ctgggtggct tcccaactt tcagttataac 2500  
gaatgccatc agcttgacca gggaaagatct gggcttcattt aggccccctt 2550  
tgaggctctc aagttctaga gagctgcctg tggacagcc cagggcagca 2600  
gagctggat gtggtgcatg ctttgcata catggccaca gtacagtctg 2650

gtcctttcc ttccccatct cttgtacaca ttttaataaa ataagggttg 2700  
gcttctgaac tacaaaaaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa 2750  
aaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa 2800  
aaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaa 2846

<210> 231  
<211> 720  
<212> PRT  
<213> Homo sapiens

<400> 231  
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln  
1 5 10 15  
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn  
20 25 30  
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys  
35 40 45  
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu  
50 55 60  
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu  
65 70 75  
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn  
80 85 90  
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp  
95 100 105  
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp  
110 115 120  
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro  
125 130 135  
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys  
140 145 150  
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg  
155 160 165  
Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp  
170 175 180  
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile  
185 190 195  
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile  
200 205 210  
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn  
215 220 225

Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser  
 230 235 240  
 Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala  
 245 250 255  
 Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg  
 260 265 270  
 Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly  
 275 280 285  
 Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile  
 290 295 300  
 Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys  
 305 310 315  
 Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln  
 320 325 330  
 Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala  
 335 340 345  
 Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu  
 350 355 360  
 Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr  
 365 370 375  
 Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys  
 380 385 390  
 Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His  
 395 400 405  
 Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg  
 410 415 420  
 Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp  
 425 430 435  
 Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu  
 440 445 450  
 Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln  
 455 460 465  
 Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu  
 470 475 480  
 His Lys Gly Ala Trp Phe Leu Val Cys Ser Gly Ala Leu Val Asn  
 485 490 495  
 Glu Arg Thr Val Val Val Ala Ala His Cys Val Thr Asp Leu Gly  
 500 505 510  
 Lys Val Thr Met Ile Lys Thr Ala Asp Leu Lys Val Val Leu Gly

515	520	525
Lys Phe Tyr Arg Asp Asp Asp Arg Asp Glu Lys Thr Ile Gln Ser		
530	535	540
Leu Gln Ile Ser Ala Ile Ile Leu His Pro Asn Tyr Asp Pro Ile		
545	550	555
Leu Leu Asp Ala Asp Ile Ala Ile Leu Lys Leu Leu Asp Lys Ala		
560	565	570
Arg Ile Ser Thr Arg Val Gln Pro Ile Cys Leu Ala Ala Ser Arg		
575	580	585
Asp Leu Ser Thr Ser Phe Gln Glu Ser His Ile Thr Val Ala Gly		
590	595	600
Trp Asn Val Leu Ala Asp Val Arg Ser Pro Gly Phe Lys Asn Asp		
605	610	615
Thr Leu Arg Ser Gly Val Val Ser Val Val Asp Ser Leu Leu Cys		
620	625	630
Glu Glu Gln His Glu Asp His Gly Ile Pro Val Ser Val Thr Asp		
635	640	645
Asn Met Phe Cys Ala Ser Trp Glu Pro Thr Ala Pro Ser Asp Ile		
650	655	660
Cys Thr Ala Glu Thr Gly Gly Ile Ala Ala Val Ser Phe Pro Gly		
665	670	675
Arg Ala Ser Pro Glu Pro Arg Trp His Leu Met Gly Leu Val Ser		
680	685	690
Trp Ser Tyr Asp Lys Thr Cys Ser His Arg Leu Ser Thr Ala Phe		
695	700	705
Thr Lys Val Leu Pro Phe Lys Asp Trp Ile Glu Arg Asn Met Lys		
710	715	720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 233  
tgtcaaggac gcactgccgt catg 24

<210> 234  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 234  
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<400> 235  
accaggcatt gtatcttag ttgtcatcaa gttcgcaatc agattggaaa 50  
agctcaacctt gaagcttct tgcctgcagt gaagcagaga gatagatatt 100  
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150  
caaattccga ttactgttg ttttgacttt gtgcctgaca gtggttgggt 200  
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250  
aaggagttca tggctaattt ccataagacc ctcattttgg ggaagggaaa 300  
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350  
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacc 400  
gatctcaattt tggaaagaggt acaggcagaa aatcccaaag tgtccagagg 450  
ccggtatcgc cctcaggaat gtaaagctt acagagggtc gccatcctcg 500  
ttccccaccc gaacagagag aaacacctga tgtacctgct ggaacatctg 550  
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600  
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtggct 650  
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700  
gtggacctgg tacccgagaa tgacttaac cttacaagt gtgaggagca 750  
tcccaagcat ctgggggttgcaggaacag cactgggtac agttacgat 800  
acagtggata ttttgggggt gttactgccc taagcagaga gcagttttc 850  
aaggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900

tgacctcaga ctcagggttg agctccaaag aatgaaaatt tccccggcccc 950  
tgcctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000  
aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050  
ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100  
aacacaatcc tttatatatc aacatcacag tggatttctg gtttggtgca 1150  
tgaccctgga tcttttgtg atgttggaa gaactgattc tttgtttgca 1200  
ataattttgg cctagagact tcaaataatgt aCACACATTA agaacctgtt 1250  
acagctcatt gttgagctga attttcctt tttgtatTTT cttagcagag 1300  
ctcctggtga tgttaggtat aaaacagttg taacaagaca gctttcttag 1350  
tcattttgat catgagggtt aaatattgt aatggatac ttgaaggact 1400  
ttatataaaaa ggatgactca aaggataaaaa tgaacgctat ttgaggactc 1450  
tggttgaagg agatttattt aaatttgaag taatataatta tggataaaaa 1500  
ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550  
cgtccaagg agaaaggtaC gaagatacaa tactgttatt catttatcct 1600  
gtacaatcat ctgtgaagtg gtgggtgtcag gtgagaaggc gtccacaaaa 1650  
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cagtgatgcc caccagagaa tacattctct attagtttt aaagagttt 1850  
tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900  
acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950  
gtaaaaaaagc aaaa 1964

<210> 236  
<211> 344  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Signal peptide  
<222> 1-27  
<223> Signal peptide

<220>  
<221> N-glycosylation sites  
<222> 4-7, 220-223, 335-338  
<223> N-glycosylation sites

<220>  
 <221> Xylose isomerase proteins  
 <222> 191-201  
 <223> Xylose isomerase proteins

<400> 236  
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu  
 1 5 10 15

Leu Leu Leu Thr Leu Cys Leu Thr Val Val Gly Trp Ala Thr  
 20 25 30

Ser Asn Tyr Phe Val Gly Ala Ile Gln Glu Ile Pro Lys Ala Lys  
 35 40 45

Glu Phe Met Ala Asn Phe His Lys Thr Leu Ile Leu Gly Lys Gly  
 50 55 60

Lys Thr Leu Thr Asn Glu Ala Ser Thr Lys Lys Val Glu Leu Asp  
 65 70 75

Asn Cys Pro Ser Val Ser Pro Tyr Leu Arg Gly Gln Ser Lys Leu  
 80 85 90

Ile Phe Lys Pro Asp Leu Thr Leu Glu Glu Val Gln Ala Glu Asn  
 95 100 105

Pro Lys Val Ser Arg Gly Arg Tyr Arg Pro Gln Glu Cys Lys Ala  
 110 115 120

Leu Gln Arg Val Ala Ile Leu Val Pro His Arg Asn Arg Glu Lys  
 125 130 135

His Leu Met Tyr Leu Leu Glu His Leu His Pro Phe Leu Gln Arg  
 140 145 150

Gln Gln Leu Asp Tyr Gly Ile Tyr Val Ile His Gln Ala Glu Gly  
 155 160 165

Lys Lys Phe Asn Arg Ala Lys Leu Leu Asn Val Gly Tyr Leu Glu  
 170 175 180

Ala Leu Lys Glu Glu Asn Trp Asp Cys Phe Ile Phe His Asp Val  
 185 190 195

Asp Leu Val Pro Glu Asn Asp Phe Asn Leu Tyr Lys Cys Glu Glu  
 200 205 210

His Pro Lys His Leu Val Val Gly Arg Asn Ser Thr Gly Tyr Arg  
 215 220 225

Leu Arg Tyr Ser Gly Tyr Phe Gly Gly Val Thr Ala Leu Ser Arg  
 230 235 240

Glu Gln Phe Phe Lys Val Asn Gly Phe Ser Asn Asn Tyr Trp Gly  
 245 250 255

Trp Gly Gly Glu Asp Asp Leu Arg Leu Arg Val Glu Leu Gln

260 265 270

Arg Met Lys Ile Ser Arg Pro Leu Pro Glu Val Gly Lys Tyr Thr  
275 280 285

Met Val Phe His Thr Arg Asp Lys Gly Asn Glu Val Asn Ala Glu  
290 295 300

Arg Met Lys Leu Leu His Gln Val Ser Arg Val Trp Arg Thr Asp  
305 310 315

Gly Leu Ser Ser Cys Ser Tyr Lys Leu Val Ser Val Glu His Asn  
320 325 330

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala  
335 340

<210> 237  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 237  
ccttacacctca gaggccagag caagc 25

<210> 238  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 238  
gagcttcatc cgttctgcgt tcacc 25

<210> 239  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 239  
caggaatgtta aagcttaca gagggctgcc atcctcggtt cccacc 46

<210> 240  
<211> 2567  
<212> DNA  
<213> Homo sapiens

<400> 240  
cgtggggccgg ggtcgcgcaag cgggctgtgg gcgcgccccgg aggagcgacc 50

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tctcccgctc cggggccccgc aatggcccag gcagtgtggc cgccgcctcg 150  
ccgcacatcctc tggcttgccct gcctcctgcc ctggggccccc gcagggggtgg 200  
ccgcaggccct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250  
ggagcgggtgg tgaccatctc ggccagccctg gtggccaagg acaacggcag 300  
cctggccctg cccgctgacg cccacctcta ccgcttccac tggatccaca 350  
ccccgctggc gcttaactggc aagatggaga agggtctcag ctccaccatc 400  
cgtgtggtcg gccacgtgcc cggggaaattc ccggctctcg tctgggtcac 450  
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500  
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tccctaccct gccccagctc cttatctact aagaccgtcc tgaaagtctc 600  
cttcctcctc cacgacccga gcaacttcct caagaccgcc ttgtttctct 650  
acagctggga cttcggggac gggacccaga tgggtactga agactccgtg 700  
gtctattata actattccat catcgggacc ttcaccgtga agctcaaagt 750  
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agaagacccgg ggacttcctcc gcctcgctga agctgcagga aacccttcga 850  
ggcatccaag tggggggcc caccctaatt cagacccctcc aaaagatgac 900  
cgtgacccctg aacttcctgg ggagccctcc tctgactgtg tgctggcgtc 950  
tcaagcctga gtgcctcccg ctggaggaag gggagtgccca ccctgtgtcc 1000  
gtggccagca cagcgtacaa cctgacccac accttcaggg accctgggga 1050  
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accacaagat ccaggtgtgg ccctccagaa tccagccggc tgtctttgct 1150  
ttccccatgtg ctacacttat cactgtgtatg ttggccttca tcatgtacat 1200  
gaccctgcgg aatgccactc agaaaaagga catggtgag aaccgggagc 1250  
caccctctgg ggtcaggtgc tgctgccaga tgtgctgtgg gcctttcttg 1300  
ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350  
gctcccgcccc ctctataagt ctgtaaaaac ttacaccgtg tgagcactcc 1400  
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cagccactga cataagcccc actcggttac cacccttgc accccctacc 1650  
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aagggtgtac acatagatgg gcacactcac agagagaagt gtgcgtac 1900  
acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950  
cgtcacatgg gcatttcaga tgatcagctc tgtatctggtaaagtcggtt 2000  
gctggatgc accctgcact agagctgaaa ggaaatttga cctccaagca 2050  
gccctgacag gttctggcc cggccctcc ctttgcgtt tgtctctgca 2100  
gttcttgcgc ccttataag gccatcctag tccctgctgg ctggcagggg 2150  
cctggatggg gggcaggact aatactgagt gattgcagag tgcttataa 2200  
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aggccttgca gcggtagaag aggttgagtc aaggccgggc gcggtggtc 2300  
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aaaaaaatac aaaaagttag ccgggcgtgg tgggggtgc ctgtagtccc 2450  
agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500  
gcttgcagtg agccagatg gcgcactgc actccagcct gagtgacaga 2550  
gcgagactct gtctcca 2567

<210> 241  
<211> 423  
<212> PRT  
<213> Homo sapiens

<400> 241  
Met Ala Gln Ala Val Trp Ser Arg Leu Gly Arg Ile Leu Trp Leu  
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Ala Cys Leu Leu Pro Trp Ala Pro Ala Gly Val Ala Ala Gly Leu  
20 25 30  
Tyr Glu Leu Asn Leu Thr Thr Asp Ser Pro Ala Thr Thr Gly Ala  
35 40 45

Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser  
                   50                      55                      60  
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile  
                   65                      70                      75  
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser  
                   80                      85                      90  
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val  
                   95                      100                    105  
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val  
                   110                    115                    120  
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly  
                   125                    130                    135  
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser  
                   140                    145                    150  
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp  
                   155                    160                    165  
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp  
                   170                    175                    180  
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr  
                   185                    190                    195  
 Tyr Asn Tyr Ser Ile Ile Gly Thr Phe Thr Val Lys Leu Lys Val  
                   200                    205                    210  
 Val Ala Glu Trp Glu Glu Val Glu Pro Asp Ala Thr Arg Ala Val  
                   215                    220                    225  
 Lys Gln Lys Thr Gly Asp Phe Ser Ala Ser Leu Lys Leu Gln Glu  
                   230                    235                    240  
 Thr Leu Arg Gly Ile Gln Val Leu Gly Pro Thr Leu Ile Gln Thr  
                   245                    250                    255  
 Phe Gln Lys Met Thr Val Thr Leu Asn Phe Leu Gly Ser Pro Pro  
                   260                    265                    270  
 Leu Thr Val Cys Trp Arg Leu Lys Pro Glu Cys Leu Pro Leu Glu  
                   275                    280                    285  
 Glu Gly Glu Cys His Pro Val Ser Val Ala Ser Thr Ala Tyr Asn  
                   290                    295                    300  
 Leu Thr His Thr Phe Arg Asp Pro Gly Asp Tyr Cys Phe Ser Ile  
                   305                    310                    315  
 Arg Ala Glu Asn Ile Ile Ser Lys Thr His Gln Tyr His Lys Ile  
                   320                    325                    330  
 Gln Val Trp Pro Ser Arg Ile Gln Pro Ala Val Phe Ala Phe Pro

335                   340                   345  
Cys Ala Thr Leu Ile Thr Val Met Leu Ala Phe Ile Met Tyr Met  
350                   355                   360  
Thr Leu Arg Asn Ala Thr Gln Gln Lys Asp Met Val Glu Asn Pro  
365                   370                   375  
Glu Pro Pro Ser Gly Val Arg Cys Cys Cys Gln Met Cys Cys Gly  
380                   385                   390  
Pro Phe Leu Leu Glu Thr Pro Ser Glu Tyr Leu Glu Ile Val Arg  
395                   400                   405  
Glu Asn His Gly Leu Leu Pro Pro Leu Tyr Lys Ser Val Lys Thr  
410                   415                   420  
Tyr Thr Val

<210> 242  
<211> 26  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 242  
catttcctta ccctggaccc agctcc 26  
  
<210> 243  
<211> 25  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 243  
gaaaggccca cagcacatct ggcag 25  
  
<210> 244  
<211> 46  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 244  
ccacgaccgg agcaacttcc tcaagaccga cttgtttctc tacagc 46  
  
<210> 245  
<211> 485  
<212> DNA  
<213> Homo sapiens

<400> 245  
gctcaagacc cagcagtggg acagccagac agacggcacf atggcactga 50  
gctcccagat ctggcccgct tgcctcctgc tcctcctcct cctcgccagc 100  
ctgaccagt gctctgtttt cccacaacag acgggacaac ttgcagagct 150  
gcaaccccaag gacagagctg gagccagggc cagctggatg cccatgttcc 200  
agaggcgaag gaggcgagac acccaacttc ccatctgcat tttctgtgc 250  
ggctgctgtc atcgatcaa gtgtggatg tgctgcaaga cgtagaacct 300  
acctgccctg cccccgtccc ctcccttcct tatttattcc tgctgcccc 350  
gaacataggt cttgaaataa aatggctggt tctttgttt tccaaaaaaaa 400  
aaaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450  
aaaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 485

<210> 246  
<211> 84  
<212> PRT  
<213> Homo sapiens

<400> 246  
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu  
1 5 10 15  
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln  
20 25 30  
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
35 40 45  
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp  
50 55 60  
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
65 70 75  
Ser Lys Cys Gly Met Cys Cys Lys Thr  
80

<210> 247  
<211> 2359  
<212> DNA  
<213> Homo sapiens

<400> 247  
ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50  
tgctggcctg gcctggatct tccaccatgt tcctgtgtc gcctttgtat 100  
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150  
ccttctcggtt ttcatcatag tgccagccat ttttggatc tcctttggta 200

tccgcaaact ctacatgaaa agtctgttaa aaatcttgc gtgggctacc 250  
ttgagaatgg agcgaggagc caaggagaag aaccaccagc tttacaagcc 300  
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350  
tcaaagagat tcgtcgaagt ggttagtagta aggctctgga caacactcca 400  
gagttcgagc tctctgacat tttctacttt tgccggaaag gaatggagac 450  
cattatggat gatgaggtga caaagagatt ctcagcagaa gaactggagt 500  
cctggAACCT gctgagcaga accaattata acttccagta catcagcctt 550  
cggtcacgg tcctgtgggg gtaggagtg ctgattcggt actgctttct 600  
gctgccgctc aggatagcac tggcttcac agggattagc cttctggtgg 650  
tggcacaac tgtggtgaa tacttgccaa atgggaggtt taaggaattc 700  
atgagtaaac atgttcactt aatgtgttac cgatctgcg tgcgagcgct 750  
gacagccatc atcacctacc atgacaggaa aaacagacca agaaatggtg 800  
gcatctgtgt ggccaatcat acctcaccga tcgatgtgat catcttggcc 850  
agcgatggct attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900  
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggttgagc 950  
gctcggaaagt gaaggatcgc cacctggtgg ctaagagact gactgaacat 1000  
gtgcaagata aaagcaagct gcctatcctc atcttcccag aaggaacctg 1050  
catcaataat acatcggtga tgatgttcaa aaaggaaagt ttgaaattg 1100  
gagccacagt ttaccctgtt gctatcaagt atgaccctca atttggcgat 1150  
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200  
gatgaccagc tggccattg tctgcagcgt gtggcacctg cctccatga 1250  
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300  
gccattgcca ggcaggagg acttgtggac ctgctgtggg atgggggcct 1350  
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acagcaagat gatcggtggg aaccacaagg acaggagccg ctcctgagcc 1450  
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cggccaccgg ctctccagga aaggcacagc tgaggcactg tggctggctt 1900  
cggcctaacc atcgccccca gccttggagc tctgcagaca tgataggaag 1950  
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gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100  
aactccccat gtgatgcgcg ctttgtgaa tgtgtgtctc ggttccccca 2150  
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gttgtggggaa tttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250  
tgtttcaagt acaggcccac aaaacggggc acggcaggcc tgagctcaga 2300  
gctgctgcac tgggcttgg atttgttctt gtgagtaat aaaactggct 2350  
ggtgaatga 2359

<210> 248

<211> 456

<212> PRT

<213> Homo sapiens

<400> 248

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Gly	Ile	Ser	Leu	Thr	Val	Leu	Phe	Thr	Leu	Leu	Leu	Val	Phe	Ile
									20			25		30

Ile	Val	Pro	Ala	Ile	Phe	Gly	Val	Ser	Phe	Gly	Ile	Arg	Lys	Leu
									35		40			45

Tyr	Met	Lys	Ser	Leu	Leu	Lys	Ile	Phe	Ala	Trp	Ala	Thr	Leu	Arg
									50		55			60

Met	Glu	Arg	Gly	Ala	Lys	Glu	Lys	Asn	His	Gln	Leu	Tyr	Lys	Pro
									65		70			75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu
									80		85			90

Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp
									95		100			105

Asn Thr Pro Glu Phe Glu Leu Ser Asp Ile Phe Tyr Phe Cys Arg

110	115	120
Lys Gly Met Glu Thr Ile Met Asp Asp	Glu Val Thr Lys Arg Phe	
125	130	135
Ser Ala Glu Glu Leu Glu Ser Trp Asn	Leu Leu Ser Arg Thr Asn	
140	145	150
Tyr Asn Phe Gln Tyr Ile Ser Leu Arg	Leu Thr Val Leu Trp Gly	
155	160	165
Leu Gly Val Leu Ile Arg Tyr Cys Phe	Leu Leu Pro Leu Arg Ile	
170	175	180
Ala Leu Ala Phe Thr Gly Ile Ser Leu	Leu Val Val Gly Thr Thr	
185	190	195
Val Val Gly Tyr Leu Pro Asn Gly Arg	Phe Lys Glu Phe Met Ser	
200	205	210
Lys His Val His Leu Met Cys Tyr Arg	Ile Cys Val Arg Ala Leu	
215	220	225
Thr Ala Ile Ile Thr Tyr His Asp Arg	Glu Asn Arg Pro Arg Asn	
230	235	240
Gly Gly Ile Cys Val Ala Asn His Thr	Ser Pro Ile Asp Val Ile	
245	250	255
Ile Leu Ala Ser Asp Gly Tyr Ala Met Val	Gly Gln Val His	
260	265	270
Gly Gly Leu Met Gly Val Ile Gln Arg Ala Met Val	Lys Ala Cys	
275	280	285
Pro His Val Trp Phe Glu Arg Ser Glu	Val Lys Asp Arg His Leu	
290	295	300
Val Ala Lys Arg Leu Thr Glu His Val	Gln Asp Lys Ser Lys Leu	
305	310	315
Pro Ile Leu Ile Phe Pro Glu Gly Thr	Cys Ile Asn Asn Thr Ser	
320	325	330
Val Met Met Phe Lys Lys Gly Ser Phe	Glu Ile Gly Ala Thr Val	
335	340	345
Tyr Pro Val Ala Ile Lys Tyr Asp Pro	Gln Phe Gly Asp Ala Phe	
350	355	360
Trp Asn Ser Ser Lys Tyr Gly Met Val	Thr Tyr Leu Leu Arg Met	
365	370	375
Met Thr Ser Trp Ala Ile Val Cys Ser	Val Trp Tyr Leu Pro Pro	
380	385	390
Met Thr Arg Glu Ala Asp Glu Asp Ala	Val Gln Phe Ala Asn Arg	
395	400	405

Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu  
410 415 420  
Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys  
425 430 435  
Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His  
440 445 450  
Lys Asp Arg Ser Arg Ser  
455

<210> 249  
<211> 1103  
<212> DNA  
<213> Homo sapiens

<400> 249  
gcccctcgaa accaggactc cagcacctct ggtcccgccc tcacccggac 50  
ccctggccct cacgtctcct ccagggatgg cgctggcggc tttgatgatc 100  
gcctcggca gcctcggcct ccacacctgg cagggccagg ctgttcccac 150  
catcctgccc ctgggcctgg ctccagacac ctttgacat acctatgtgg 200  
gttgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250  
atggcccacc atgcctgct gcggaaatcc tgggaggcag cccaggagac 300  
ctgggaggac aagcgtcgag ggcttacctt gccccctggc ttcaaagccc 350  
agaatggaat agccattatg gtctacacca actcatcgaa caccttgtac 400  
tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450  
catgaggcac ttcccttca aggccctgca tttctacctg atccgggccc 500  
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gtgttccgag gtgtggcag ctttcgttt gaacccaaga ggctggggga 600  
ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtgg 650  
cccacagatt tggggagaag aggcggggct gtgtgtctgc gccagggtg 700  
cagctagggt cacaatctga gggggctcc tctctgcccc cctggaagac 750  
tctgctctg gcccctggag agttccagct ctcaggggtt gggccctgaa 800  
agtccaacat ctgccactta ggagccctgg gaacgggtga cttcatatg 850  
acgaagaggc acctccagca gccttgagaa gcaagaacat gttccggac 900  
ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950  
cagcagggct gaggaactc tgctatgtga tggggacttc ctgggacaag 1000

caaggaaagt actgaggcag ccacttgatt gaacgggttt gcaatgtgga 1050  
gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100  
gga 1103

<210> 250  
<211> 240  
<212> PRT  
<213> Homo sapiens

<400> 250  
Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu  
1 5 10 15  
His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly  
20 25 30  
Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu  
35 40 45  
Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala  
50 55 60  
His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr  
65 70 75  
Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys  
80 85 90  
Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn  
95 100 105  
Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly  
110 115 120  
Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His  
125 130 135  
Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly  
140 145 150  
Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser  
155 160 165  
Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly  
170 175 180  
Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe  
185 190 195  
Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu  
200 205 210  
Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr  
215 220 225  
Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro

230

235

240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtggcttcat ttcagtggct gacttccaga gagcaatatg gctggttccc 50

caacatgcct caccctcatc tatatcctt ggcagctcac agggtcagca 100

gcctctggac ccgtgaaaga gctggtcggt tccgttggtg gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250

gtgacccaa atcgtaatacg ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctcagcaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccaccca ggagtacgtg 400

ctgcatgtct acgagcacct gtcaaagcct aaagtccacca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcatggaac 500

atggggaaga ggatgtgatt tatacctgga aggcctggg gcaagcagcc 550

aatgagtccc ataatgggtc catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaaact 650

tctcaagccc catccttgcc aggaagctct gtgaaggtgc tgctgatgac 700

ccagattcct ccatggtcct cctgtgtctc ctgttggtgcc ccctcctgct 750

cagtctctt gtactgggc tatttcatttgc gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttgc tcggaaact 850

cctaacatat gcccccatc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000

atgccagaca caccaaggct atttgcctat gagaatgtta tctagacagc 1050

agtgcactcc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp  
1 5 10 15

Gln Leu Thr Gly Ser Ala Ala Ser Gly Pro Val Lys Glu Leu Val  
20 25 30

Gly Ser Val Gly Gly Ala Val Thr Phe Pro Leu Lys Ser Lys Val  
35 40 45

Lys Gln Val Asp Ser Ile Val Trp Thr Phe Asn Thr Thr Pro Leu  
50 55 60

Val Thr Ile Gln Pro Glu Gly Gly Thr Ile Ile Val Thr Gln Asn  
65 70 75

Arg Asn Arg Glu Arg Val Asp Phe Pro Asp Gly Gly Tyr Ser Leu  
80 85 90

Lys Leu Ser Lys Leu Lys Lys Asn Asp Ser Gly Ile Tyr Tyr Val  
95 100 105

Gly Ile Tyr Ser Ser Ser Leu Gln Gln Pro Ser Thr Gln Glu Tyr  
110 115 120

Val Leu His Val Tyr Glu His Leu Ser Lys Pro Lys Val Thr Met  
125 130 135

Gly Leu Gln Ser Asn Lys Asn Gly Thr Cys Val Thr Asn Leu Thr  
140 145 150

Cys Cys Met Glu His Gly Glu Glu Asp Val Ile Tyr Thr Trp Lys  
155 160 165

Ala Leu Gly Gln Ala Ala Asn Glu Ser His Asn Gly Ser Ile Leu  
170 175 180

Pro Ile Ser Trp Arg Trp Gly Glu Ser Asp Met Thr Phe Ile Cys  
185 190 195

Val Ala Arg Asn Pro Val Ser Arg Asn Phe Ser Ser Pro Ile Leu  
200 205 210

Ala Arg Lys Leu Cys Glu Gly Ala Ala Asp Asp Pro Asp Ser Ser  
215 220 225

Met Val Leu Leu Cys Leu Leu Leu Val Pro Leu Leu Leu Ser Leu  
230 235 240

Phe Val Leu Gly Leu Phe Leu Trp Phe Leu Lys Arg Glu Arg Gln  
245 250 255  
Glu Glu Tyr Ile Glu Glu Lys Lys Arg Val Asp Ile Cys Arg Glu  
260 265 270  
Thr Pro Asn Ile Cys Pro His Ser Gly Glu Asn Thr Glu Tyr Asp  
275 280 285  
Thr Ile Pro His Thr Asn Arg Thr Ile Leu Lys Glu Asp Pro Ala  
290 295 300  
Asn Thr Val Tyr Ser Thr Val Glu Ile Pro Lys Lys Met Glu Asn  
305 310 315  
Pro His Ser Leu Leu Thr Met Pro Asp Thr Pro Arg Leu Phe Ala  
320 325 330  
Tyr Glu Asn Val Ile  
335

<210> 254

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 254

ctgggtccccc aacatgcctc accctcatct atatccttg gcagctcaca 50

gggtcagcag cctctggacc cgtgaaagag ctggtcggtt ccgttggtgg 100

ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150

tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200

actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250

tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcaggg 300

tctactatgt gggatatac agctcatcac tccagcagcc ctccacccag 350

gagtacgtgc tgcgtgtcta cgagcacctg tcaaagccta aagtcaccat 400

gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450

gcatggaaaca tggggaaagag gatgtgattt atacctggaa ggccctgggg 500

caagcagcca atgagtccca taatgggtcc atcctccca tctcctggag 550

atggggagaa agtgatatga cttcatctg cgttgccagg aaccctgtca 600

gcagaaaactt ctcaagcccc atccttgcca ggaagctctg tgaaggtgct 650

gctgatgacc cagattcctc catggccctc ctgtgtctcc tgggtggcc 700

cctcctgctc agtctctttg tactggggct atttctttgg tttctgaaga 750

gagagagaca agaagagtac attgaagaga agaagagagt ggacattgt 800

cgggaaactc ctaacatatg cccccattct ggagagaaca cagagtacga 850  
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900  
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950  
ctgctcacga tgccagacac accaaggcta tttgcctatg agaatgttat 1000  
ctagacagca gtgcactccc ctaagtctct gctaaaaaaaaaaaaaaaaa 1050  
aaa 1053

<210> 255  
<211> 860  
<212> DNA  
<213> Homo sapiens

<400> 255.  
gaaagacgtg gtcctgacag acagacaatc ctattcccta cccaaatgaa 50  
gatgctgctg ctgctgtgtt tggactgac cctagtctgt gtccatgcag 100  
aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150  
gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200  
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250  
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300  
tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350  
tgatggattc aatacattta ctatacctaa gacagactat gataacttcc 400  
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450  
gggctctatg gccgagaacc agatttgagt tcagacatca aggaaaggaa 500  
tgcacaacta tgtgaggagc atggaatcct tagagaaaaat atcattgacc 550  
tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600  
gcctccagtg ttgagtgac acttctcacc aggactccac catcatccct 650  
tcctatccat acagcatccc cagtataaat tctgtatct gcattccatc 700  
ctgtctcaact gagaagtcca attccagtct atcaacatgt tacctaggat 750  
acctcatcaa gaatcaaaga cttctttaaa ttctctttg atacaccctt 800  
gacaattttt catgaaatta ttccctttcc tggtaataa atgattaccc 850  
ttgcacttaa 860

<210> 256  
<211> 180  
<212> PRT  
<213> Homo sapiens

<400> 256  
Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys  
1 5 10 15  
Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val  
20 25 30  
Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp  
35 40 45  
Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu  
50 55 60  
Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His  
65 70 75  
Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp  
80 85 90  
Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe  
95 100 105  
Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met  
110 115 120  
Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met  
125 130 135  
Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu  
140 145 150  
Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn  
155 160 165  
Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu  
170 175 180

<210> 257

<211> 766

<212> DNA

<213> Homo sapiens

<400> 257

ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50  
gacatcctgc aatggattca gcctgcttgt tctactgctg ttaggatgt 100  
ttctcaatgc gataacctcta attgtcagct tagttgagga agaccaattt 150  
tctaaaacc ccatctttg ctttgagtgg tggttcccag gaattatagg 200  
agcaggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250  
aaagagcgtg ctgcaacaac agaactggaa tgtttcttc atcattttc 300  
agtgtgatca cagtcattgg tgctctgtat tgcatgctga tatccatcca 350  
ggctcttta aaaggcctc tcatgtgtaa ttctccaagc aacagtaatg 400

ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450  
ttcaacttgc agtggtttt caatgactct tgtgcacctc ctactggttt 500  
caataaaccc accagtaacg acaccatggc gagtggctgg agagcatcta 550  
gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600  
gtatTTTtag gtctattgct tgTTGGAATT ctggaggtcc tgTTGGGCT 650  
cagtcaGATA gtcatcggtt tccttggctg tctgtgtgga gtctctaAGC 700  
gaagaagtca aattgtgtAG ttAAATGGGA atAAAATGTA agtatcAGTA 750  
gtttgaaaaa aaaaaa 766

<210> 258  
<211> 229  
<212> PRT  
<213> Homo sapiens

<400> 258  
Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu  
1 5 10 15  
Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu  
20 25 30  
Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile  
35 40 45  
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu  
50 55 60  
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg  
65 70 75  
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe  
80 85 90  
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser  
95 100 105  
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser  
110 115 120  
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp  
125 130 135  
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser  
140 145 150  
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr  
155 160 165  
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu  
170 175 180

Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu  
185 190 195  
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile  
200 205 210  
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg  
215 220 225  
Ser Gln Ile Val

<210> 259  
<211> 434  
<212> DNA  
<213> Homo sapiens

<400> 259  
gtcgaatcca aatcaactcat tgtgaaagct gagctcacag ccgaataagc 50  
caccatgagg ctgtcagtgt gtctcctgat ggtctcgctg gccctttgct 100  
gctaccaggc ccatgctctt gtctgcccag ctgttgcttc tgagatcaca 150  
gtcttcttat tcttaagtga cgctgcggta aacctccaag ttgccaaact 200  
taatccacct ccagaagctc ttgcagccaa gttgaaagtg aagcactgca 250  
ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcctggtgg 300  
aaatagtcaa aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350  
tccaaagtct ttcaacgaca ccctgatctt cactaaaaat tgtaaaggaa 400  
tcaacacgtt gctttaataa atcaacttgcc ctgc 434

<210> 260  
<211> 83  
<212> PRT  
<213> Homo sapiens

<400> 260  
Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys  
1 5 10 15  
Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu  
20 25 30  
Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln  
35 40 45  
Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu  
50 55 60  
Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu  
65 70 75  
Ser Leu Lys Lys Ser Trp Trp Lys

<210> 261  
<211> 636  
<212> DNA  
<213> Homo sapiens

<400> 261  
atccgttctc tgcgctgcca gtcaggtga gccctcgcca aggtgacctc 50  
gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100  
ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150  
cgccccagtg cctctccccc tgcagccctg cccctcgaac tgtgacatgg 200  
agagagtgac cctggccctt ctcctactgg caggcctgac tgccttggaa 250  
gccaatgacc catttgccaa taaagacgt cccttctact atgactggaa 300  
aacacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350  
ggatcgcggc agttctgagt ggcaaattgca aatacaagag cagccagaag 400  
cagcacagtc ctgtacctga gaaggccatc ccactcatca ctccaggctc 450  
tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500  
taacactggc ccccagcacc tcctccctg ggaggccta tcctcaagga 550  
aggacttctc tccaaggca ggctgttagg ccccttctg atcaggaggc 600  
ttctttatga attaaactcg ccccaccacc ccctca 636

<210> 262  
<211> 89  
<212> PRT  
<213> Homo sapiens

<400> 262															
Met	Glu	Arg	Val	Thr	Leu	Ala	Leu	Leu	Leu	Leu	Ala	Gly	Leu	Thr	
1					5				10					15	
Ala	Leu	Glu	Ala	Asn	Asp	Pro	Phe	Ala	Asn	Lys	Asp	Asp	Pro	Phe	
									20		25			30	
Tyr	Tyr	Asp	Trp	Lys	Asn	Leu	Gln	Leu	Ser	Gly	Leu	Ile	Cys	Gly	
									35		40			45	
Gly	Leu	Leu	Ala	Ile	Ala	Gly	Ile	Ala	Ala	Val	Leu	Ser	Gly	Lys	
									50		55			60	
Cys	Lys	Tyr	Lys	Ser	Ser	Gln	Lys	Gln	His	Ser	Pro	Val	Pro	Glu	
									65		70			75	
Lys	Ala	Ile	Pro	Leu	Ile	Thr	Pro	Gly	Ser	Ala	Thr	Thr	Cys		
									80		85				

<210> 263  
<211> 1676  
<212> DNA  
<213> Homo sapiens

<400> 263  
ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50  
ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100  
actcctgctg ctgggtgtgg gtcctggct actcgccgc atcctggctt 150  
ggacctatgc cttctataac aactgccgcc ggctccagtg tttcccacag 200  
cccccaaaac ggaactggtt ttggggtcac ctggcctga tcactcctac 250  
agaggagggc ttgaaggact cgaccagat gtcggccacc tattcccagg 300  
gctttacggt atggctgggt cccatcatcc cttcatcgat tttatgccac 350  
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400  
ggataatctc ttcatcaggt tcctgaagcc ctggctggga gaaggatac 450  
tgctgagtgg cggtgacaag tggagccgcc accgtcgat gctgacgccc 500  
gccttccatt tcaacatcct gaagtcttat ataacgatct tcaacaagag 550  
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600  
gtcgtctgga catgttgag cacatcagcc tcatgacctt ggacagtcta 650  
cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700  
atatatggcc accatcttgg agtcagtgcc cttgttagag aaaagaagcc 750  
agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800  
cggcgcttcc acagggcctg ccgcctggtg catgacttca cagacgctgt 850  
catccgggag cggcgctcgca ccctccac tcagggattt gatgatttt 900  
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950  
ctgagcaagg atgaagatgg gaaggcattt tcagatgagg atataagagc 1000  
agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050  
tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100  
tgccgacagg aggtgcaaga gcttctgaag gaccgcgatc ctaaagagat 1150  
tgaatggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200  
agagcctgag gttacatccc ccagctccct tcattccccg atgctgcacc 1250  
caggacattt ttctccaga tggccgagtc atccccaaag gcattacctg 1300

cctcatcgat attatagggg tccatcacaa cccaaactgtg tggccggatc 1350  
ctgaggtcta cgaccgccttc cgcttgacc cagagaacag caaggggagg 1400  
tcacctctgg cttttattcc tttctccgca gggcccagga actgcacatcg 1450  
gcaggcggttc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500  
tgcacttccg gttcctgcca gaccacactg agccccgcag gaagctggaa 1550  
ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agcccctgaa 1600  
tgtaggcttgc agtgacttt ctgaccatc cacctgtttt tttgcagatt 1650  
gtcatgaata aaacggtgct gtcaaa 1676

<210> 264

<211> 524

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala
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Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu
		20						25					30	
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys
		35						40					45	
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe
		50						55					60	
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys
		65						70					75	
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val
		80						85					90	
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp
		95						100					105	
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys
		110						115					120	
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly
		125						130					135	
Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met
		140						145					150	
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr
		155						160					165	
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His
		170						175					180	

Leu Ala Ser Glu Gly Ser Ser Arg Leu Asp Met Phe Glu His Ile  
                  185                     190                     195  
 Ser Leu Met Thr Leu Asp Ser Leu Gln Lys Cys Ile Phe Ser Phe  
                  200                     205                     210  
 Asp Ser His Cys Gln Glu Arg Pro Ser Glu Tyr Ile Ala Thr Ile  
                  215                     220                     225  
 Leu Glu Leu Ser Ala Leu Val Glu Lys Arg Ser Gln His Ile Leu  
                  230                     235                     240  
 Gln His Met Asp Phe Leu Tyr Tyr Leu Ser His Asp Gly Arg Arg  
                  245                     250                     255  
 Phe His Arg Ala Cys Arg Leu Val His Asp Phe Thr Asp Ala Val  
                  260                     265                     270  
 Ile Arg Glu Arg Arg Arg Thr Leu Pro Thr Gln Gly Ile Asp Asp  
                  275                     280                     285  
 Phe Phe Lys Asp Lys Ala Lys Ser Lys Thr Leu Asp Phe Ile Asp  
                  290                     295                     300  
 Val Leu Leu Leu Ser Lys Asp Glu Asp Gly Lys Ala Leu Ser Asp  
                  305                     310                     315  
 Glu Asp Ile Arg Ala Glu Ala Asp Thr Phe Met Phe Gly Gly His  
                  320                     325                     330  
 Asp Thr Thr Ala Ser Gly Leu Ser Trp Val Leu Tyr Asn Leu Ala  
                  335                     340                     345  
 Arg His Pro Glu Tyr Gln Glu Arg Cys Arg Gln Glu Val Gln Glu  
                  350                     355                     360  
 Leu Leu Lys Asp Arg Asp Pro Lys Glu Ile Glu Trp Asp Asp Leu  
                  365                     370                     375  
 Ala Gln Leu Pro Phe Leu Thr Met Cys Val Lys Glu Ser Leu Arg  
                  380                     385                     390  
 Leu His Pro Pro Ala Pro Phe Ile Ser Arg Cys Cys Thr Gln Asp  
                  395                     400                     405  
 Ile Val Leu Pro Asp Gly Arg Val Ile Pro Lys Gly Ile Thr Cys  
                  410                     415                     420  
 Leu Ile Asp Ile Ile Gly Val His His Asn Pro Thr Val Trp Pro  
                  425                     430                     435  
 Asp Pro Glu Val Tyr Asp Pro Phe Arg Phe Asp Pro Glu Asn Ser  
                  440                     445                     450  
 Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro  
                  455                     460                     465  
 Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val

470

475

480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His  
485 490 495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly  
500 505 510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln  
515 520

<210> 265

<211> 584

<212> DNA

<213> Homo sapiens

<400> 265

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tttccctctc cttgactcca gggaaatatac ctttcaactc tcagcacctc 150

atgaagacgc gcgcctaact ccggaggagc tagaaagagc ttcccttcta 200

cagatattgc cagagatgct ggggcagaa agaggggata ttctcaggaa 250

agcagactca agtaccaaca ttttaaccc aagaggaaat ttgagaaagt 300

ttcaggattt ctctggacaa gatcctaaca ttttactgag tcatctttg 350

gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400

gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450

acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500

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aatcctctat gtttgcaca aaaaaaaaaa aaaa 584

<210> 266

<211> 124

<212> PRT

<213> Homo sapiens

<400> 266

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1 5 10 15

Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser  
20 25 30

Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu  
35 40 45

Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu  
50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr  
65 70 75  
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe  
80 85 90  
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg  
95 100 105  
Ile Trp Lys Pro Tyr Lys Arg Glu Thr Pro Asp Cys Phe Trp  
110 115 120  
Lys Tyr Cys Val

<210> 267  
<211> 654  
<212> DNA  
<213> Homo sapiens

<400> 267  
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taaggacctg acagccacca ggcaccacct ccggcaggaa ctgcaggccc 150  
acctgtctgc aaccctagctg aggccatgcc ctccccaggg accgtctgca 200  
gcctcctgtc ctcggcatg ctctggctgg acttggccat ggcaggctcc 250  
agcttcctga gccctgaaca ccagagatgc cagcagagaa aggagtcgaa 300  
gaagccacca gccaagctgc agccccgagc tctagcaggc tggctccgccc 350  
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400  
ttcaacgccc ccttgatgt tggaatcaag ctgtcagggg ttcaagtacca 450  
gcagcacagc caggccctgg ggaagttct tcaggacatc ctctgggaag 500  
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ctctctctaa gtttagaagc gtcatctgg ctttcgctt gcttctgcag 600  
caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650  
tgta 654

<210> 268  
<211> 117  
<212> PRT  
<213> Homo sapiens

<400> 268  
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1 5 10 15

Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro  
           20                     25                         30  
  
 Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro  
           35                     40                     45  
  
 Ala Lys Leu Gln Pro Arg Ala Leu Ala Gly Trp Leu Arg Pro Glu  
           50                     55                     60  
  
 Asp Gly Gly Gln Ala Glu Gly Ala Glu Asp Glu Leu Glu Val Arg  
           65                     70                     75  
  
 Phe Asn Ala Pro Phe Asp Val Gly Ile Lys Leu Ser Gly Val Gln  
           80                     85                     90  
  
 Tyr Gln Gln His Ser Gln Ala Leu Gly Lys Phe Leu Gln Asp Ile  
           95                     100                    105  
  
 Leu Trp Glu Glu Ala Lys Glu Ala Pro Ala Asp Lys  
           110                    115

<210> 269  
 <211> 1332  
 <212> DNA  
 <213> Homo sapiens

<400> 269  
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 agaatatgaa cacgtggctg ctgttccccc ccctgttccc ggtgcaggtg 150  
 cagaccctga tagtcgtat catcggatg ctctgctcc tgctggactt 200  
 tcttggcttg gtgcacctgg gccagctgct catcttccac atctacctga 250  
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300  
 gctgctcatc ttacacctct acttgagttat gtccttaacc ctgagcccc 350  
 cacgcctggg gccagagtct ttgtcccccg tgcgcatg tgttcagggt 400  
 cagcctctcc cagaagttagt atcatggaca aaaaggcaa atcacaggaa 450  
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500  
 gccgagacct gcaggagtgg tgccaggtgc ttgaagtaac aagttaaaa 550  
 tgttcagaga caatggatg gaatcttta ggcaagaaca ggacattatg 600  
 aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650  
 aatatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700  
 tgtggtcttg cttggtctca cagtggcac agcggtaggc ggtcagtc 750  
 gttgctgaac gacggagggt aaactccccca gccccaaagaa aacctgtgtt 800

gaaagttaaca acaacacctcc tgctcctggc accagccgtt ttggtcatgg 850  
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gctgtggcct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950  
aggccagccc ccaagaatgc cctgctcctg acagcttggc caaccctgg 1000  
tcagggcaga gggagttggg tgggtcaggc tctgggctca cctccatctc 1050  
cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100  
acacacccca ccaagagcct cttgttcat aaccacaggt tacccctacaa 1150  
accactgtcc ccacacaacc ctggggatgt ttaaaacac acacctctaa 1200  
cgccatatctt acagtcactg ttgtcttgcc tgagggttga atttttttta 1250  
atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270  
<211> 142  
<212> PRT  
<213> *Homo sapiens*

<210> 271  
<211> 1484  
<212> DNA  
<213> Homo sapiens

<400> 271  
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accatggcca agatggagct ctcgaaggcc ttctctggcc agcggacact 100  
cctatctgcc atcctcagca tgctatcaact cagttctcc acaacatccc 150  
tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagccccctg 200  
tgcgagaaag gtctggcagc caagtgcattt gacatgccag tgtccctgga 250  
tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300  
ctggggatga ccgggtctcc ttccggagct tccggagtgg catgtggcta 350  
tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400  
tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450  
ccacgttgca aggcccatgt caccccaactc tccgatttgg aggaaagcgg 500  
ttgatggaga aggctccct cccctccctt cccttgggc tttgtggcaa 550  
aaatcctatg gttatccctg ggaacgcaga tcacctacat cgacttcaa 600  
ttcatcagct tcctcctgct actaacagac ttgctactca ctggaaaccc 650  
tgcctgtggg ctcaaactga gcgccttgc tgctgttcc tctgtcctgt 700  
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gcgactgtca acttgggtcc agaagactgg agaccacatg tttgaaatta 800  
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cggtgtcac caccccaac acgtacacca ggatggtgct ggagttcaag 900  
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ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050  
gagggagtcg acttctactc cgagctgcgg aacaaggat ttcaaagagg 1100  
ggccagccag gagctgaaag aagcagttag gtcacatgttga gaggaagagc 1150  
agtgttagga gttaagcggg tttggggagt aggcttgagc cctaccttac 1200  
acgtctgctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250  
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tcctaaggga ttcctgggtg ccactgctct ctttcctct acagctccat 1350  
cttgcac ccacccaca tctcacacat ccagaattcc cttcttact 1400  
gatagttct gtgccaggaa ctgggctaaa ccatggagat aaaaagaaga 1450  
gtaaaataca cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

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				20				25					30	
Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val
					35				40				45	
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp
				50				55					60	
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu
				65				70					75	
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe
				80				85					90	
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val
					95				100				105	
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro
				110				115					120	
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu
				125				130					135	
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu
				140				145					150	
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly
				155				160					165	
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg
				170				175					180	
Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr
				185				190					195	
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys
				200				205					210	
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His
				215				220					225	

Asp Val Phe Thr Ser Leu Pro Ser Asp Cys Gln Leu Gly Ser Arg  
230 235 240  
Arg Leu Glu Thr Thr Cys Leu Glu Leu Trp Leu Gly Leu Leu His  
245 250 255  
Gly Leu Ala Leu Leu His Leu Leu His Gly Val Gly Cys His His  
260 265 270  
Leu Gln His Val His Gln Asp Gly Ala Gly Val Gln Val Gln Ala  
275 280 285

<210> 273  
<211> 1158  
<212> DNA  
<213> Homo sapiens

<400> 273  
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ctcacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150  
ctctggtagc ctgcagagca aacaggacaa cctatgttat ggatgttcc 200  
accaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250  
tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300  
atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350  
cctgccttat tcctcctccc aagtctgttc tcttattgtc aacctcagca 400  
caacaggctg ggcataatgg cattacagag aaagcaatct gtgtggctag 450  
tggcagatt accatgcaag ccccaggaga aatggaggag cttttagcc 500  
accccccgt cagccagtat taacatgtcc cttccccct gccccggcg 550  
agattcagga cattcgcccc tgtgtgccac caaaccagga cttccctt 600  
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ggcagtgtt gcatcttca agctccgtt ctagggcgat ggcattgtatg 700  
ttacaatccc acttgcctga ataatcaagt gggaaaggaa agcagaggaa 750  
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accaaaggaa agcaacagga acttctgcaa ctggtttta tcggaaagat 850  
catcctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900  
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tcagacctgg aattctgatt ccaaactttt tattactttg ggaagtcaact 1000

cagcctcccc gtagccatct ccagggtgac ggaacccagt gtattacctg 1050  
ctggaaccaa ggaaactaac aatgttagtt actagtgaat accccaatgg 1100  
tttctccaat tatgcccatg ccaccaaaac aataaaacaa aattctctaa 1150  
cactgaaa 1158

<210> 274  
<211> 86  
<212> PRT  
<213> Homo sapiens

<400> 274  
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20 25 30  
Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn  
35 40 45  
Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly  
50 55 60  
Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg  
65 70 75  
Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu  
80 85

<210> 275  
<211> 2694  
<212> DNA  
<213> Homo sapiens

<400> 275  
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attagttgt ccttggagg agcaatcgga ctgatgttt tgatgcttg 150  
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tttacatcct ttcacctatt ccatactgca tagcaagaag attagttggat 250  
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aacgggcatt gtcgtgtcag cttttggact ccctattgta tttgccagag 350  
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actcagtgcataatatacgctg catttataacc tcagaggggc caagtgttaa 1050  
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acatttttga gataaggttt ttatattgtt ttattattgt tagagtgggt 1250  
tgcaatgtgg gaagaaatga cattgaaattt ccagtttttgc aatcctgttt 1300  
ctatttataa gtgaaatttgc tcatcttcata tcaacccccc atgttttacc 1350  
ctgttaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400  
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tatttggat gttgtatata ttacataaaaa taactttca aatatacggtt 1500  
aataacactt agaagtgttt acttacctgg aaaataatttgc ctatgccgt 1550  
cattcagagt gccccctccc ctgcaaggcc ttgccatgtat taacaagtaa 1600  
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gagttaatgc aaagtagcca agtccagctatatacgatctt tcagaaacat 1850  
acccgtacccaa aaaattccca gtaaccaggc atgatcaattt tatagtggtc 1900  
gtttacatct aataattatc aggactttt tcaggagttt gttataaaaa 1950

cattcaagtt ggtctgacag tattttgtta aggatattt 2000  
tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050  
aatcatgaca gctgtctgtt gtttatgaa gtttatttct caagaaaatg 2100  
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acaggttta ttgcctaact taagccatga cttagata tgagatgacg 2200  
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acttggccac agacttttc taacagctgc gtattatttc tatataactaa 2500  
ttgcattggc agcattgtgt ctttgacctt gtatactagc ttgacatagt 2550  
gctgtctctg atttctaggc tagttacttg agatatgaat ttccataga 2600  
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<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

Met	Ala	Gly	Ile	Lys	Ala	Leu	Ile	Ser	Leu	Ser	Phe	Gly	Gly	Ala
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Ile	Gly	Leu	Met	Phe	Leu	Met	Leu	Gly	Cys	Ala	Leu	Pro	Ile	Tyr
			20					25					30	

Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser
				35					40				45	

Pro	Ile	Pro	Tyr	Cys	Ile	Ala	Arg	Arg	Leu	Val	Asp	Asp	Thr	Asp
				50					55				60	

Ala	Met	Ser	Asn	Ala	Cys	Lys	Glu	Leu	Ala	Ile	Phe	Leu	Thr	Thr
					65				70				75	

Gly	Ile	Val	Val	Ser	Ala	Phe	Gly	Leu	Pro	Ile	Val	Phe	Ala	Arg
				80				85					90	

Ala	His	Leu	Ile	Glu	Trp	Gly	Ala	Cys	Ala	Leu	Val	Leu	Thr	Gly
					95				100				105	

Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe

110

115

120

Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp  
125 130

<210> 277

<211> 4104

<212> DNA

<213> Homo sapiens

<400> 277

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caaagcatga gtgagccgc tctctgcagc tgcccggggc gcgaatggca 250

ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggc cgtttccaat 300

gacggacatt aaccagactg tcagatcctg gggagtcgcg agcccccagt 350

ttggagtttt ttcccccac aacgtcacag tccgaactgc agagggaaag 400

gaaggcggca ggaaggcgaa gtcgggcgtc cggcacgtag ttgggaaact 450

tgcgggtcct agaagtcgc tccccgcctt gccggccgc ctgcagccc 500

cgagccgagc agcaaagtga gacattgtgc gcctgccaga tccgcggcc 550

gcggaccggg gctgcctcgg aaacacagag gggtcttc tgcgcctgca 600

tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtcactct 650

ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtctc 700

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<212> PRT

<213> Homo sapiens

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Met Leu Pro Ala Ala Pro Ser Gly Cys Pro Gln Leu Cys Arg Cys  
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Glu Gly Arg Leu Leu Tyr Cys Glu Ala Leu Asn Leu Thr Glu Ala  
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Pro His Asn Leu Ser Gly Leu Leu Gly Leu Ser Leu Arg Tyr Asn  
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Ser Leu Ser Glu Leu Arg Ala Gly Gln Phe Thr Gly Leu Met Gln  
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Leu Thr Trp Leu Tyr Leu Asp His Asn His Ile Cys Ser Val Gln  
95 100 105

Gly Asp Ala Phe Gln Lys Leu Arg Arg Val Lys Glu Leu Thr Leu  
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Ser Ser Asn Gln Ile Thr Gln Leu Pro Asn Thr Thr Phe Arg Pro  
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Met Pro Asn Leu Arg Ser Val Asp Leu Ser Tyr Asn Lys Leu Gln  
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Ala Leu Ala Pro Asp Leu Phe His Gly Leu Arg Lys Leu Thr Thr  
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Leu His Met Arg Ala Asn Ala Ile Gln Phe Val Pro Val Arg Ile  
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Phe Gln Asp Cys Arg Ser Leu Lys Phe Leu Asp Ile Gly Tyr Asn  
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Gln Leu Lys Ser Leu Ala Arg Asn Ser Phe Ala Gly Leu Phe Lys  
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Leu Thr Glu Leu His Leu Glu His Asn Asp Leu Val Lys Val Asn  
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Phe Ala His Phe Pro Arg Leu Ile Ser Leu His Ser Leu Cys Leu  
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Arg Arg Asn Lys Val Ala Ile Val Val Ser Ser Leu Asp Trp Val  
245 250 255

Trp Asn Leu Glu Lys Met Asp Leu Ser Gly Asn Glu Ile Glu Tyr  
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 Met Glu Pro His Val Phe Glu Thr Val Pro His Leu Gln Ser Leu  
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Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser		
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Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val		
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Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe		
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Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala		
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Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro		
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Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly		
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<211> 77

<212> PRT

<213> Homo sapiens

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Cys	Ser	Ala	Phe	Trp	Trp	His	Asn	Lys	Gly	Leu	Ala	Leu	Ile	Phe
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<211> 2623

<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
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Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
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Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
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His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
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Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
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<212> DNA

<213> Homo sapiens

<400> 286

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<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

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Glu Asn Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr  
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Pro Val Ser Gly Glu Gly Arg Ala Ala Ala Pro Asp Val Ala  
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Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly  
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Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile  
95 100 105

Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu  
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Ile Leu Asp Leu Lys Ile Ile Gln Pro Asp Lys Asn Asn Tyr Ala  
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Ala Met Val Phe His Tyr Met Ser Ile Thr Ile Leu Val Phe Phe  
140 145 150

Met Met Glu Ile Ile Phe Lys Leu Phe Val Phe Arg Leu Ser Ser  
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Phe Thr Thr Ser Leu Arg Ser Trp Met Pro Val Val Val Val

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Ser Phe Ile Leu Asp Ile Val Leu Leu Phe Gln Glu His Gln Phe  
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Glu Ala Leu Gly Leu Leu Ile Leu Leu Arg Leu Trp Arg Val Ala  
200                    205                    210

Arg Ile Ile Asn Gly Ile Ile Ile Ser Val Lys Thr Arg Ser Glu  
215                    220                    225

Arg Gln Leu Leu Arg Leu Lys Gln Met Asn Val Gln Leu Ala Ala  
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245                    250                    255

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<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

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					20			25						30
Lys	Ser	Ile	Phe	Lys	Leu	Ser	Val	Phe	Ile	Pro	Ser	Gln	Glu	Phe
					35			40						45
Ser	Thr	Tyr	Arg	Gln	Trp	Lys	Gln	Lys	Ile	Val	Gln	Ala	Gly	Asp
					50			55						60

Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr  
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 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu  
       80                    85                    90  
  
 Asp Lys Lys Asn Asp Gly Arg Ile Asp Ala Gln Glu Ile Met Gln  
       95                    100                    105  
  
 Ser Leu Arg Asp Leu Gly Val Lys Ile Ser Glu Gln Gln Ala Glu  
       110                    115                    120  
  
 Lys Ile Leu Lys Ser Met Asp Lys Asn Gly Thr Met Thr Ile Asp  
       125                    130                    135  
  
 Trp Asn Glu Trp Arg Asp Tyr His Leu Leu His Pro Val Glu Asn  
       140                    145                    150  
  
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       170                    175                    180  
  
 Arg Gln Thr Gly Met Trp Trp Arg His Leu Val Ala Gly Gly Gly  
       185                    190                    195  
  
 Ala Gly Ala Val Ser Arg Thr Cys Thr Ala Pro Leu Asp Arg Leu  
       200                    205                    210  
  
 Lys Val Leu Met Gln Val His Ala Ser Arg Ser Asn Asn Met Gly  
       215                    220                    225  
  
 Ile Val Gly Gly Phe Thr Gln Met Ile Arg Glu Gly Gly Ala Arg  
       230                    235                    240  
  
 Ser Leu Trp Arg Gly Asn Gly Ile Asn Val Leu Lys Ile Ala Pro  
       245                    250                    255  
  
 Glu Ser Ala Ile Lys Phe Met Ala Tyr Glu Gln Ile Lys Arg Leu  
       260                    265                    270  
  
 Val Gly Ser Asp Gln Glu Thr Leu Arg Ile His Glu Arg Leu Val  
       275                    280                    285  
  
 Ala Gly Ser Leu Ala Gly Ala Ile Ala Gln Ser Ser Ile Tyr Pro  
       290                    295                    300  
  
 Met Glu Val Leu Lys Thr Arg Met Ala Leu Arg Lys Thr Gly Gln  
       305                    310                    315  
  
 Tyr Ser Gly Met Leu Asp Cys Ala Arg Arg Ile Leu Ala Arg Glu  
       320                    325                    330  
  
 Gly Val Ala Ala Phe Tyr Lys Gly Tyr Val Pro Asn Met Leu Gly  
       335                    340                    345  
  
 Ile Ile Pro Tyr Ala Gly Ile Asp Leu Ala Val Tyr Glu Thr Leu

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365	370	375
Gly Val Phe Val Leu Leu Ala Cys Gly Thr Met Ser Ser Thr Cys		
380	385	390
Gly Gln Leu Ala Ser Tyr Pro Leu Ala Leu Val Arg Thr Arg Met		
395	400	405
Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser		
410	415	420
Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu		
425	430	435
Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val		
440	445	450
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Val Gln Ser Arg		

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 <211> 1658  
 <212> DNA  
 <213> Homo sapiens

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<210> 291  
<211> 282  
<212> PRT  
<213> Homo sapiens

<400> 291  
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Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala  
35 40 45  
Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro

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Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly		
65	70	75
Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu		
80	85	90
Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala		
95	100	105
Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val		
110	115	120
Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser		
125	130	135
Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe		
140	145	150
Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr		
155	160	165
Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val		
170	175	180
Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser		
185	190	195
Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val		
200	205	210
Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys		
215	220	225
Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val		
230	235	240
Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn		
245	250	255
Ser Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp		
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<210> 292

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 292

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<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293  
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Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu  
35 40 45  
Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro  
50 55 60  
Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu  
65 70 75  
Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu  
80 85 90  
Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp  
95 100 105  
Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln  
110 115 120  
Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro  
125 130 135  
Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro  
140 145 150  
Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro  
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Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp  
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<210> 294  
<211> 1164  
<212> DNA  
<213> Homo sapiens

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<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

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20 25 30

Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn  
35 40 45

Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro  
50 55 60

Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser  
65 70 75

Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu  
80 85 90

Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys  
95 100 105

Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser  
110 115 120

Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser  
125 130 135

Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val  
140 145 150

Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu  
155 160 165

Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe  
170 175 180

Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys  
185 190 195

Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro  
200 205 210

Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu  
215 220 225

Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro  
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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aatctgggtc cccggggcggc gggggcccaa ggcctgaccc agactccgac 200

cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgacgct 250

accggagcac cgcccgact ggtcttcccc ggaagacaag gataatccta 300

gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350

ggctgccgag ctcttgcccg ccacgggtgc caccggcttt agccggtcgt 400

ccgccattaa cgaggaggat gggtcttcag aagagggggt tttgtatataat 450

gccggaaagg atagcaccag cagagagctt cccagtgcga ctcccaatac 500

agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550

tcaggctgac ttcaagcctg ccgcgcctcc ccggggaggcgt tactgaggac 600

ctgccaggct cgcaggccac cctgagccag tggccacac ctgggtctac 650

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gcccctcga gttggggcgc tgagccagct ccgcacggag cacaagcct 850  
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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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				20				25						30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
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Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
					50			55						60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp
					65			70						75
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val	
				80				85						90
Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly
					95				100					105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr
					110			115						120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser
					125			130						135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu

140	145	150
Thr Ser Ser Leu Pro Arg Ser Pro Gly Arg Ser Thr Glu Asp Leu		
155	160	165
Pro Gly Ser Gln Ala Thr Leu Ser Gln Trp Ser Thr Pro Gly Ser		
170	175	180
Thr Pro Ser Arg Trp Pro Ser Pro Ser Pro Thr Ala Met Pro Ser		
185	190	195
Pro Glu Asp Leu Arg Leu Val Leu Met Pro Trp Gly Pro Trp His		
200	205	210
Cys His Cys Lys Ser Gly Thr Met Ser Arg Ser Arg Ser Gly Lys		
215	220	225
Leu His Gly Leu Ser Gly Arg Leu Arg Val Gly Ala Leu Ser Gln		
230	235	240
Leu Arg Thr Glu His Lys Pro Cys Thr Tyr Gln Gln Cys Pro Cys		
245	250	255
Asn Arg Leu Arg Glu Glu Cys Pro Leu Asp Thr Ser Leu Cys Thr		
260	265	270
Asp Thr Asn Cys Ala Ser Gln Ser Thr Thr Ser Thr Arg Thr Thr		
275	280	285
Thr Thr Pro Phe Pro Thr Ile His Leu Arg Ser Ser Pro Ser Leu		
290	295	300
Pro Pro Ala Ser Pro Cys Pro Ala Leu Ala Phe Trp Lys Arg Val		
305	310	315
Arg Ile Gly Leu Glu Asp Ile Trp Asn Ser Leu Ser Ser Val Phe		
320	325	330
Thr Glu Met Gln Pro Ile Asp Arg Asn Gln Arg		
335	340	

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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cgaccgtgag ccggtgttacc gcgactgcgt actgcagtgc gaagagcaga 150

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gtgggtcacc gttgggctct acctccagga aggtcacaaa gtgcctcagt 300

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ccgctaccgc accttcgtgc cagcctcctc ccccatgtac cacacctgtg 450  
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<210> 299  
<211> 320  
<212> PRT  
<213> Homo sapiens

<400> 299  
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20 25 30  
Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala  
35 40 45  
Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala  
50 55 60  
Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val  
65 70 75

Thr Val Gly Leu Tyr Leu Gln Glu Gly His Lys Val Pro Gln Phe  
                   80                  85                  90  
  
 His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro  
                   95                  100                 105  
  
 Ala Ser Ala Val Ala Ser Phe Leu Asn Gly Leu Ala Ser Leu Val  
                   110                  115                 120  
  
 Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met  
                   125                  130                 135  
  
 Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp  
                   140                  145                 150  
  
 Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu  
                   155                  160                 165  
  
 Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile  
                   170                  175                 180  
  
 Tyr Leu Cys Cys Val Arg Thr Val Gly Leu Gln His Pro Ala Val  
                   185                  190                 195  
  
 Val Ser Ala Phe Arg Ala Leu Leu Leu Met Leu Thr Val His  
                   200                  205                 210  
  
 Val Ser Tyr Leu Ser Leu Ile Arg Phe Asp Tyr Gly Tyr Asn Leu  
                   215                  220                 225  
  
 Val Ala Asn Val Ala Ile Gly Leu Val Asn Val Val Trp Trp Leu  
                   230                  235                 240  
  
 Ala Trp Cys Leu Trp Asn Gln Arg Arg Leu Pro His Val Arg Lys  
                   245                  250                 255  
  
 Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu  
                   260                  265                 270  
  
 Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala  
                   275                  280                 285  
  
 Ile Trp His Ile Ser Thr Ile Pro Val His Val Leu Phe Phe Ser  
                   290                  295                 300  
  
 Phe Leu Glu Asp Asp Ser Leu Tyr Leu Leu Lys Glu Ser Glu Asp  
                   305                  310                 315  
  
 Lys Phe Lys Leu Asp  
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<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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cctcagtcat cagaacctga aggagttgc cctgaccaac ccagagaaga 200  
gcagcaccaa agaaacggag agaaaagaaa ccaaagccga ggaggagctg 250  
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<210> 301  
<211> 461  
<212> PRT  
<213> Homo sapiens

<400> 301  
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Met Leu Leu Gly Leu Leu Met Ala Ala Cys Phe Thr Phe Cys Leu  
20 25 30  
Ser His Gln Asn Leu Lys Glu Phe Ala Leu Thr Asn Pro Glu Lys  
35 40 45  
Ser Ser Thr Lys Glu Thr Glu Arg Lys Glu Thr Lys Ala Glu Glu  
50 55 60  
Glu Leu Asp Ala Glu Val Leu Glu Val Phe His Pro Thr His Glu  
65 70 75  
Trp Gln Ala Leu Gln Pro Gly Gln Ala Val Pro Ala Gly Ser His  
80 85 90  
Val Arg Leu Asn Leu Gln Thr Gly Glu Arg Glu Ala Lys Leu Gln  
95 100 105  
Tyr Glu Asp Lys Phe Arg Asn Asn Leu Lys Gly Lys Arg Leu Asp  
110 115 120  
Ile Asn Thr Asn Thr Tyr Thr Ser Gln Asp Leu Lys Ser Ala Leu  
125 130 135  
Ala Lys Phe Lys Glu Gly Ala Glu Met Glu Ser Ser Lys Glu Asp  
140 145 150  
Lys Ala Arg Gln Ala Glu Val Lys Arg Leu Phe Arg Pro Ile Glu  
155 160 165  
Glu Leu Lys Lys Asp Phe Asp Glu Leu Asn Val Val Ile Glu Thr  
170 175 180  
Asp Met Gln Ile Met Val Arg Leu Ile Asn Lys Phe Asn Ser Ser  
185 190 195  
Ser Ser Ser Leu Glu Glu Lys Ile Ala Ala Leu Phe Asp Leu Glu  
200 205 210  
Tyr Tyr Val His Gln Met Asp Asn Ala Gln Asp Leu Leu Ser Phe  
215 220 225

Gly Gly Leu Gln Val Val Ile Asn Gly Leu Asn Ser Thr Glu Pro  
 230 235 240  
 Leu Val Lys Glu Tyr Ala Ala Phe Val Leu Gly Ala Ala Phe Ser  
 245 250 255  
 Ser Asn Pro Lys Val Gln Val Glu Ala Ile Glu Gly Gly Ala Leu  
 260 265 270  
 Gln Lys Leu Leu Val Ile Leu Ala Thr Glu Gln Pro Leu Thr Ala  
 275 280 285  
 Lys Lys Lys Val Leu Phe Ala Leu Cys Ser Leu Leu Arg His Phe  
 290 295 300  
 Pro Tyr Ala Gln Arg Gln Phe Leu Lys Leu Gly Gly Leu Gln Val  
 305 310 315  
 Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val  
 320 325 330  
 Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe  
 335 340 345  
 Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys  
 350 355 360  
 Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu  
 365 370 375  
 Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu  
 380 385 390  
 His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu  
 395 400 405  
 Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg  
 410 415 420  
 Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu  
 425 430 435  
 Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu  
 440 445 450  
 Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg  
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<210> 302  
 <211> 2136  
 <212> DNA  
 <213> Homo sapiens

<400> 302  
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aaaaagaatt tgaaaaaaaaaaaaaaaaaaaaaaaaaaa 2100  
aaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaa 2136

<210> 303  
<211> 247  
<212> PRT  
<213> Homo sapiens

<400> 303  
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Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser  
35 40 45  
Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr  
50 55 60  
Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly  
65 70 75  
Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr  
80 85 90  
Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser  
95 100 105  
Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val  
110 115 120  
Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile  
125 130 135  
Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His

140	145	150
Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala		
155	160	165
Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp		
170	175	180
Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly		
185	190	195
Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr		
200	205	210
Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly		
215	220	225
Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln		
230	235	240
Arg Ser Leu Leu Cys Lys Asp		
245		

<210> 304  
<211> 240  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 108, 123, 126, 154, 198, 206, 217  
<223> unknown base

<400> 304  
aagctggttt aaggaagcag aggagggtta gattcggtga gtgaggacgg 50  
aagatcaacc cattccatt ccgcagatg gcctatgttt ctggtctctc 100  
ccttcggnat catcagtggt gtnttntctg ttatcaatat tttggctgat 150  
gcanttgggc caggtgtggt tggatccat ggagactcac cctattantt 200  
cctganttca gccttntga cagcagccat tatcctgctc 240

<210> 305  
<211> 378  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332  
<223> unknown base

<400> 305  
gaccgaccgt tcagatgccc gggtccagta cggcttcctg atttttggtg 50  
ctgctgtntc tgtccttcta caggaggtgt tccgcttgc ctantacaag 100

ctgcttaaga aggcatatga ggggttagca tngctgagtg aggacggaag 150  
atcacccatt tccatccgcc agatggccta tgtttntggt ntttccttcg 200  
gtatcatcag tggtgtttt tctgttatca atatttggn tcatgcantt 250  
ggccaggtg tgggtggat ccatggagan tcaccctatt aattcctgaa 300  
ttcagcctt ntgacagcag ccattatcct gntccatacc ttttgggag 350  
ttgtgtttt tcatgcctgt gagaggag 378

<210> 306  
<211> 655  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1, 22, 129, 133, 184  
<223> unknown base

<400> 306  
ngttggagaa gtggcgccga ctttcatttgg gggtttcgtt ttccccctt 50  
tcccttccc cgggtctgg ggtgacatttgc cacggggcccc tcgtgggtc 100  
gcgttgcac cccacgcggaa ctccccagnt ggngcgcctt tcccatattgc 150  
ctgtcctggt caggccccca ccccccttcc cacntgacca gccatgggg 200  
ctgcgggtttt tttcggtgc actttcggtc cgttcggccc ggccttcgcg 250  
cttttcttga tcactgtggc tggggaccccg cttecggtta tcattcctggt 300  
cgcaggggca ttttcttgc tggtctccct gctcctggcc tctgtggtct 350  
ggttcatctt ggtccatgtg accgaccgtt cagatgccc gctccagttac 400  
ggcctcctga tttttgggtgc tgctgtcttctt gtccttctac aggaggtgtt 450  
ccgccttgc tactacaagc tgcttaagaa ggcagatgag gggtagcat 500  
cgctgagtga ggacggaaga tcaccatctt ccatccgcac gatggcctat 550  
gtttctggtc tctccttcgg tatcatcagt ggtgtcttctt ctgttatcaa 600  
tattttggct gatgcacttg ggccaggtgtt ggttggatc catggagact 650  
caccc 655

<210> 307  
<211> 650  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure

<222> 52, 89, 128  
<223> unknown base

<400> 307  
gtaaaagaaa gtggccggac cttcattggg gtttcgggttc ccccccttcc 50  
cnttccccgg ggtctgggg tgacattgca ccgcgcacct cgtggggtcg 100  
cgttgccacc ccacgcggac tccccagntg gcgcgcacct cccatttgcc 150  
tgtcctggtc aggccccac cccccttccc acctgaccag ccatggggc 200  
tgcggtggtt ttctggctgc actttcgatcg cgttcgggcc cggccttcgc 250  
gctttcttg atcaactgtgg ctggggaccc gcttcgcgtt atcatcctgg 300  
tcgcaggggc attttctgg ctggtctccc tgctcctggc ctctgtggtc 350  
tggttcatct tggccatgt gaccgaccgg tcagatgcac ggctccagta 400  
cggcctcctg atttttggtg ctgctgtctc tgtccttcta caggaggtgt 450  
tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500  
tcgctgagtg aggacggaag atcacccatc tccatccgcc agatggccta 550  
tgtttctggc ctctccttcg gtatcatcag tggtgtcttc tctgttatca 600  
atattttggc tgatgcactt gggccaggtg tggttggat ccatggagac 650

<210> 308  
<211> 1570  
<212> DNA  
<213> Homo sapiens

<400> 308  
gccccaggaa gcagtgggtg gttataactc agggccggtg cccagagccc 50  
aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100  
gctggggagca aatccccac cccctacctg ggggacaggg caagtgagac 150  
ctggtgaggg tggctcagca ggcagggaaag gagaggtgtc tgtgcgtcct 200  
gcacccacat ctttctctgt cccctccttg ccctgtctgg aggctgctag 250  
actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgcctat 300  
ggtggcccggt ccttgggtt cctctctacc tggggaaata aggtgcagcg 350  
gccatggcta cagcaagacc cccctggatg tgggtgcctt gtgcgtctat 400  
cacagccttg cttctggggg tcacagagca tggctcggcc aacaatgatg 450  
tttcctgtga ccacccctct aacaccgtgc cctctggag caaccaggac 500  
ctgggagctg gggccggggaa agacgccccgg tggatgaca gcagcagccg 550

catcatcaat ggatccgact gcgatatgca cacccagccg tggcaggccg 600  
cgctgttgct aaggcccaac cagctctact gcggggcggt gttggtgcac 650  
ccacagtggc tgctcacggc cgcccactgc aggaagaaag ttttcagagt 700  
ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750  
tgttccaggg ggtcaaatcc atccccacc ctggctactc ccaccctggc 800  
caactctaacg acctcatgct catcaaactg aacagaagaa ttcgtcccac 850  
taaagatgtc agacccatca acgtctccctc tcattgtccc tctgctggga 900  
caaagtgctt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950  
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gtgcgaggat gcttaccgaa gacagataga tgacaccatg ttctgcgcgg 1050  
gtgacaaagc aggttagagac tcctgccagg gtgattctgg ggggcctgtg 1100  
gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150  
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accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450  
gccccatccc ttctctgcag ctctgaccca aatttagtcc cagaaataaa 1500  
ctgagaagtg .aaaaaaaaa 1550

ctgagaagtg .aaaaaaaaa 1570

<210> 309  
<211> 293  
<212> PRT  
<213> Homo sapiens

<400> 309  
Met Ala Thr Ala Arg Pro Pro Trp Met Trp Val Leu Cys Ala Leu  
1 5 10 15  
Ile Thr Ala Leu Leu Gly Val Thr Glu His Val Leu Ala Asn  
20 25 30  
Asn Asp Val Ser Cys Asp His Pro Ser Asn Thr Val Pro Ser Gly  
35 40 45  
Ser Asn Gln Asp Leu Gly Ala Gly Glu Asp Ala Arg Ser

50	55	60
Asp Asp Ser Ser Ser Arg Ile Ile Asn Gly Ser Asp Cys Asp Met		
65	70	75
His Thr Gln Pro Trp Gln Ala Ala Leu Leu Leu Arg Pro Asn Gln		
80	85	90
Leu Tyr Cys Gly Ala Val Leu Val His Pro Gln Trp Leu Leu Thr		
95	100	105
Ala Ala His Cys Arg Lys Lys Val Phe Arg Val Arg Leu Gly His		
110	115	120
Tyr Ser Leu Ser Pro Val Tyr Glu Ser Gly Gln Gln Met Phe Gln		
125	130	135
Gly Val Lys Ser Ile Pro His Pro Gly Tyr Ser His Pro Gly His		
140	145	150
Ser Asn Asp Leu Met Leu Ile Lys Leu Asn Arg Arg Ile Arg Pro		
155	160	165
Thr Lys Asp Val Arg Pro Ile Asn Val Ser Ser His Cys Pro Ser		
170	175	180
Ala Gly Thr Lys Cys Leu Val Ser Gly Trp Gly Thr Thr Lys Ser		
185	190	195
Pro Gln Val His Phe Pro Lys Val Leu Gln Cys Leu Asn Ile Ser		
200	205	210
Val Leu Ser Gln Lys Arg Cys Glu Asp Ala Tyr Pro Arg Gln Ile		
215	220	225
Asp Asp Thr Met Phe Cys Ala Gly Asp Lys Ala Gly Arg Asp Ser		
230	235	240
Cys Gln Gly Asp Ser Gly Gly Pro Val Val Cys Asn Gly Ser Leu		
245	250	255
Gln Gly Leu Val Ser Trp Gly Asp Tyr Pro Cys Ala Arg Pro Asn		
260	265	270
Arg Pro Gly Val Tyr Thr Asn Leu Cys Lys Phe Thr Lys Trp Ile		
275	280	285
Gln Glu Thr Ile Gln Ala Asn Ser		
290		

<210> 310  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 310  
tcctgtgacc acccctctaa cacc 24

<210> 311  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 311  
ctggaacatc tgctgccag attc 24

<210> 312  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 312  
gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313  
<211> 3010  
<212> DNA  
<213> Homo sapiens

<400> 313  
atggtaacg accggtgaa gaccatggc ggcgctgccc aacttgagga 50  
ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100  
ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150  
gtgctttcc tgaaccacgc ccacgcgcg ggcacggcgc ccccacctgt 200  
cgtcagcact ggggctgcca gcgccaacag cgccctggtc actgtggaaa 250  
gggcggacag ctgcacaccc agcatcctca ttgacccgcg ctgccccgac 300  
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aggagctgct ggacacgctg gccgaccagg tgccccggct gctggcccg 450  
gcctcagagc tgcagacgga gtgcattggg ctgcggagg ggcattggcac 500  
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agcgacatcc tggatgccct gcagaggac cgggggctgg gcccggcccg 650  
caacaaggcc gacattcaga gagcgctgc ccggggaaacc cggcccccggg 700

gctgtccac tggctccgg cccc gagact gtctggacgt cctcctaagc 750  
ggacagcagg acgatggcgt ctactctgtc tttcccaccc actaccggc 800  
cggttccag gtgtactgtg acatgcgcac ggacggcggc ggctggacgg 850  
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caggtgccta ggggggtgtgg ggttccgttc tccctcccc tcccactgaa 2900  
gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggtttgt 2950  
gggagaggcc gtgtgacctg gtcctctgtc ccagtgccac caggtcatcc 3000  
acatgcgcag 3010

<210> 314

<211> 461

<212> PRT

<213> Homo sapiens

<400> 314

Met	Val	Asn	Asp	Arg	Trp	Lys	Thr	Met	Gly	Gly	Ala	Ala	Gln	Leu
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Glu	Asp	Arg	Pro	Arg	Asp	Lys	Pro	Gln	Arg	Pro	Ser	Cys	Gly	Tyr
								20					30	

Val	Leu	Cys	Thr	Val	Leu	Leu	Ala	Leu	Ala	Val	Leu	Leu	Ala	Val
										35			45	

Ala	Val	Thr	Gly	Ala	Val	Leu	Phe	Leu	Asn	His	Ala	His	Ala	Pro
									50				60	

Gly	Thr	Ala	Pro	Pro	Pro	Val	Val	Ser	Thr	Gly	Ala	Ala	Ser	Ala
									65				75	

Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu

80	85	90
Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp	Leu Thr Asp Ser Phe	
95	100	105
Ala Arg Leu Glu Ser Ala Gln Ala Ser Val	Leu Gln Ala Leu Thr	
110	115	120
Glu His Gln Ala Gln Pro Arg Leu Val Gly	Asp Gln Glu Gln Glu	
125	130	135
Leu Leu Asp Thr Leu Ala Asp Gln Leu Pro	Arg Leu Leu Ala Arg	
140	145	150
Ala Ser Glu Leu Gln Thr Glu Cys Met Gly	Leu Arg Lys Gly His	
155	160	165
Gly Thr Leu Gly Gln Gly Leu Ser Ala Leu	Gln Ser Glu Gln Gly	
170	175	180
Arg Leu Ile Gln Leu Leu Ser Glu Ser Gln	Gly His Met Ala His	
185	190	195
Leu Val Asn Ser Val Ser Asp Ile Leu Asp Ala	Leu Gln Arg Asp	
200	205	210
Arg Gly Leu Gly Arg Pro Arg Asn Lys Ala	Asp Leu Gln Arg Ala	
215	220	225
Pro Ala Arg Gly Thr Arg Pro Arg Gly Cys	Ala Thr Gly Ser Arg	
230	235	240
Pro Arg Asp Cys Leu Asp Val Leu Leu Ser	Gly Gln Gln Asp Asp	
245	250	255
Gly Val Tyr Ser Val Phe Pro Thr His Tyr	Pro Ala Gly Phe Gln	
260	265	270
Val Tyr Cys Asp Met Arg Thr Asp Gly Gly	Trp Thr Val Phe	
275	280	285
Gln Arg Arg Glu Asp Gly Ser Val Asn Phe	Phe Arg Gly Trp Asp	
290	295	300
Ala Tyr Arg Asp Gly Phe Gly Arg Leu Thr	Gly Glu His Trp Leu	
305	310	315
Gly Leu Lys Arg Ile His Ala Leu Thr Thr	Gln Ala Ala Tyr Glu	
320	325	330
Leu His Val Asp Leu Glu Asp Phe Glu Asn	Gly Thr Ala Tyr Ala	
335	340	345
Arg Tyr Gly Ser Phe Gly Val Gly Leu Phe	Ser Val Asp Pro Glu	
350	355	360
Glu Asp Gly Tyr Pro Leu Thr Val Ala Asp	Tyr Ser Gly Thr Ala	
365	370	375

Gly Asp Ser Leu Leu Lys His Ser Gly Met Arg Phe Thr Thr Lys  
380 385 390

Asp Arg Asp Ser Asp His Ser Glu Asn Asn Cys Ala Ala Phe Tyr  
395 400 405

Arg Gly Ala Trp Trp Tyr Arg Asn Cys His Thr Ser Asn Leu Asn  
410 415 420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val  
425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser  
440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg  
455 460

<210> 315  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 315  
cacacgtcca acctcaatgg gcag 24

<210> 316  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 316  
gaccagcagg gccaggaca agg 23

<210> 317  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 317  
gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318  
<211> 1841  
<212> DNA  
<213> Homo sapiens

<400> 318  
gcagtcagag acttccccctg cccctcgctg ggaaagaaca ttaggaatgc 50

cttttagtgc cttgcttcct gaactagctc acagtagccc ggcggccca 100  
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ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200  
atgagcctgc attctcaagc ctctgccaca actcgccatc cagagccccg 250  
gcgcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300  
ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350  
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aaaatgggtt ctcgtgtttc ctgttcagga tcaccagcat ttctgagctt 1150  
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caaccaacct cagaaaccca taatgtcatc tgccttcgg gcttagagat 1250  
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tgtttggttc agttcataact agtcccttcc caatccatca gtaaagaccc 1500

catctgcctt gtccatgccg tttcccaaca gggatgtcac ttgatatgag 1550  
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gagagattaa agaccagaaa aaagttagcc tcttcatctg cacctgtaat 1750  
agtttcagtt cctattttct tccattgacc catattata cctttcaggt 1800  
actgaagatt taataataat aaatgtaaaat actgtaaaaa a 1841

<210> 319

<211> 280

<212> PRT

<213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
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Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25				30	
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
					35				40				45	
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55				60	
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70				75	
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85				90	
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100				105	
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115				120	
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130				135	
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145				150	
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160				165	
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175				180	
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190				195	

Tyr Trp Thr Gly Leu Leu Arg Pro Asp Ser Gly Lys Ala Trp Leu  
200 205 210  
Trp Met Asp Gly Thr Pro Phe Thr Ser Glu Leu Phe His Ile Ile  
215 220 225  
Ile Asp Val Thr Ser Pro Arg Ser Arg Asp Cys Val Ala Ile Leu  
230 235 240  
Asn Gly Met Ile Phe Ser Lys Asp Cys Lys Glu Leu Lys Arg Cys  
245 250 255  
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260 265 270  
Val Pro Pro Glu Thr Leu Gly Glu Gly Asp  
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<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 59, 95, 149, 331, 364, 438, 446

<223> unknown base

<400> 320

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cttttgcac aattcggcat ccagagcccc ggccgcacaga gcacaggngt 150

ccttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200

ggtgctgctg atagggctgg cagccctgg gctttgttt tttcagtact 250

accagctctc caatactggt caagacacca tttctcaaat ggaagaaaaga 300

ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaatataaa 350

gcttgagga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400

ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450

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<210> 321

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 321

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<213> Homo sapiens  
  
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&lt;210&gt; 326

&lt;211&gt; 775

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 326

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				20				25			30			

Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro
				35				40			45			

Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg  
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 Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly  
                       65                      70                      75  
 Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro  
                       80                      85                      90  
 Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg  
                       95                      100                    105  
 Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu  
                       110                      115                    120  
 Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val  
                       125                      130                    135  
 Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe  
                       140                      145                    150  
 Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Pro Gly Met Ala Val  
                       155                      160                    165  
 Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala  
                       170                      175                    180  
 Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe  
                       185                      190                    195  
 Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala  
                       200                      205                    210  
 Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr  
                       215                      220                    225  
 Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly  
                       230                      235                    240  
 Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu  
                       245                      250                    255  
 Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile  
                       260                      265                    270  
 Val Ser Ala Arg Pro Asp Glu Trp Leu Gly Arg Cys Ile Leu Asp  
                       275                      280                    285  
 Ala Thr Gly Val Gly Cys Thr Gly Asp His Glu Gly Val His Tyr  
                       290                      295                    300  
 Ser His Leu Glu Leu Ser Pro Gly Glu Pro Val Gln Glu Gly Asp  
                       305                      310                    315  
 Pro His Phe Arg Ser Ala Leu Thr Ala His Pro Val Arg Asp Pro  
                       320                      325                    330  
 Val His Met Tyr Gln Leu His Lys Ala Phe Ala Arg Ala Glu Leu

335	340	345
Glu Arg Thr Tyr Gln Glu Ile Gln Glu Leu Gln Trp Glu Ile Gln		
350	355	360
Asn Thr Ser His Leu Ala Val Asp Gly Asp Arg Ala Ala Ala Trp		
365	370	375
Pro Val Gly Ile Pro Ala Pro Ser Arg Pro Ala Ser Arg Phe Glu		
380	385	390
Val Leu Arg Trp Asp Tyr Phe Thr Glu Gln His Ala Phe Ser Cys		
395	400	405
Ala Asp Gly Ser Pro Arg Cys Pro Leu Arg Gly Ala Asp Arg Ala		
410	415	420
Asp Val Ala Asp Val Leu Gly Thr Ala Leu Glu Glu Leu Asn Arg		
425	430	435
Arg Tyr His Pro Ala Leu Arg Leu Gln Lys Gln Gln Leu Val Asn		
440	445	450
Gly Tyr Arg Arg Phe Asp Pro Ala Arg Gly Met Glu Tyr Thr Leu		
455	460	465
Asp Leu Gln Leu Glu Ala Leu Thr Pro Gln Gly Gly Arg Arg Pro		
470	475	480
Leu Thr Arg Arg Val Gln Leu Leu Arg Pro Leu Ser Arg Val Glu		
485	490	495
Ile Leu Pro Val Pro Tyr Val Thr Glu Ala Ser Arg Leu Thr Val		
500	505	510
Leu Leu Pro Leu Ala Ala Ala Glu Arg Asp Leu Ala Pro Gly Phe		
515	520	525
Leu Glu Ala Phe Ala Thr Ala Ala Leu Glu Pro Gly Asp Ala Ala		
530	535	540
Ala Ala Leu Thr Leu Leu Leu Tyr Glu Pro Arg Gln Ala Gln		
545	550	555
Arg Val Ala His Ala Asp Val Phe Ala Pro Val Lys Ala His Val		
560	565	570
Ala Glu Leu Glu Arg Arg Phe Pro Gly Ala Arg Val Pro Trp Leu		
575	580	585
Ser Val Gln Thr Ala Ala Pro Ser Pro Leu Arg Leu Met Asp Leu		
590	595	600
Leu Ser Lys Lys His Pro Leu Asp Thr Leu Phe Leu Leu Ala Gly		
605	610	615
Pro Asp Thr Val Leu Thr Pro Asp Phe Leu Asn Arg Cys Arg Met		
620	625	630

His Ala Ile Ser Gly Trp Gln Ala Phe Phe Pro Met His Phe Gln  
635 640 645

Ala Phe His Pro Gly Val Ala Pro Pro Gln Gly Pro Gly Pro Pro  
650 655 660

Glu Leu Gly Arg Asp Thr Gly Arg Phe Asp Arg Gln Ala Ala Ser  
665 670 675

Glu Ala Cys Phe Tyr Asn Ser Asp Tyr Val Ala Ala Arg Gly Arg  
680 685 690

Leu Ala Ala Ala Ser Glu Gln Glu Glu Glu Leu Leu Glu Ser Leu  
695 700 705

Asp Val Tyr Glu Leu Phe Leu His Phe Ser Ser Leu His Val Leu  
710 715 720

Arg Ala Val Glu Pro Ala Leu Leu Gln Arg Tyr Arg Ala Gln Thr  
725 730 735

Cys Ser Ala Arg Leu Ser Glu Asp Leu Tyr His Arg Cys Leu Gln  
740 745 750

Ser Val Leu Glu Gly Leu Gly Ser Arg Thr Gln Leu Ala Met Leu  
755 760 765

Leu Phe Glu Gln Glu Gln Gly Asn Ser Thr  
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<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

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<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

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atggctcagt gtgcagacag 20

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gcatgctgct ccgtgaagta gtcc 24

<210> 331  
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atgcatggga aagaaggcct gccc 24

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<212> DNA  
<213> Homo sapiens

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gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400  
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<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

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20 25 30

Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly  
35 40 45

Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu  
50 55 60

Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly  
65 70 75

Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val  
80 85 90

Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe  
95 100 105

Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg

110                    115                    120  
Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro  
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Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro  
140                    145                    150  
Glu Asp Glu

<210> 335  
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<400> 337  
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tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550  
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aaaaaaaaaa aa 2162

<210> 340  
<211> 574  
<212> PRT  
<213> Homo sapiens

<400> 340  
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20 25 30

Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln  
                  35                        40                        45  
  
 Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser  
                  50                        55                        60  
  
 His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys  
                  65                        70                        75  
  
 Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp  
                  80                        85                        90  
  
 Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly  
                  95                        100                       105  
  
 Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp  
                  110                       115                       120  
  
 Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys  
                  125                       130                       135  
  
 Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr  
                  140                       145                       150  
  
 Ala Ser Phe Lys Pro Leu Gly Leu Ala Asn Asp Thr Asp His Tyr  
                  155                       160                       165  
  
 Phe Leu Arg Tyr Ala Val Leu Pro Arg Glu Val Val Cys Thr Glu  
                  170                       175                       180  
  
 Asn Leu Thr Pro Trp Lys Lys Leu Leu Pro Cys Ser Ser Lys Ala  
                  185                       190                       195  
  
 Gly Leu Ser Val Leu Leu Lys Ala Asp Arg Leu Phe His Thr Ser  
                  200                       205                       210  
  
 Tyr His Ser Gln Ala Val His Ile Arg Pro Val Cys Arg Asn Ala  
                  215                       220                       225  
  
 Arg Cys Thr Ser Ile Ser Trp Glu Leu Arg Gln Thr Leu Ser Val  
                  230                       235                       240  
  
 Val Phe Asp Ala Phe Ile Thr Gly Gln Gly Lys Lys Asp Trp Ser  
                  245                       250                       255  
  
 Leu Phe Arg Met Phe Ser Arg Thr Leu Thr Glu Pro Cys Pro Leu  
                  260                       265                       270  
  
 Ala Ser Glu Ser Arg Val Tyr Val Asp Ile Thr Thr Tyr Asn Gln  
                  275                       280                       285  
  
 Asp Asn Glu Thr Leu Glu Val His Pro Pro Pro Thr Thr Thr Tyr  
                  290                       295                       300  
  
 Gln Asp Val Ile Leu Gly Thr Arg Lys Thr Tyr Ala Ile Tyr Asp  
                  305                       310                       315  
  
 Leu Leu Asp Thr Ala Met Ile Asn Asn Ser Arg Asn Leu Asn Ile

320	325	330
Gln Leu Lys Trp Lys Arg Pro Pro Glu Asn Glu Ala Pro Pro Val		
335	340	345
Pro Phe Leu His Ala Gln Arg Tyr Val Ser Gly Tyr Gly Leu Gln		
350	355	360
Lys Gly Glu Leu Ser Thr Leu Leu Tyr Asn Thr His Pro Tyr Arg		
365	370	375
Ala Phe Pro Val Leu Leu Leu Asp Thr Val Pro Trp Tyr Leu Arg		
380	385	390
Leu Tyr Val His Thr Leu Thr Ile Thr Ser Lys Gly Lys Glu Asn		
395	400	405
Lys Pro Ser Tyr Ile His Tyr Gln Pro Ala Gln Asp Arg Leu Gln		
410	415	420
Pro His Leu Leu Glu Met Leu Ile Gln Leu Pro Ala Asn Ser Val		
425	430	435
Thr Lys Val Ser Ile Gln Phe Glu Arg Ala Leu Leu Lys Trp Thr		
440	445	450
Glu Tyr Thr Pro Asp Pro Asn His Gly Phe Tyr Val Ser Pro Ser		
455	460	465
Val Leu Ser Ala Leu Val Pro Ser Met Val Ala Ala Lys Pro Val		
470	475	480
Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser Leu Phe Pro Val Ser		
485	490	495
Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr Glu Pro Leu Leu		
500	505	510
Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr Asn Val Ile		
515	520	525
Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser Phe Tyr		
530	535	540
Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr Gly		
545	550	555
Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly		
560	565	570
Val Pro Pro Leu		

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<210> 344  
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<210> 345  
<211> 111  
<212> PRT  
<213> Homo sapiens

<400> 345  
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Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys  
20 25 30  
Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp  
35 40 45  
Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys  
50 55 60  
Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys  
65 70 75  
Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro  
80 85 90  
Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser  
95 100 105  
Thr Arg Cys Pro Gln Lys  
110

<210> 346  
<211> 2528  
<212> DNA  
<213> Homo sapiens

<400> 346  
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gtcctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggtcct 200  
tgcttctggc tgtcctggc ttctttctct tcgccttgcc ctctttatt 250  
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agaaaggct ctacagtccc tggcaaagcc taagtcccag gcacccacaa 350  
ggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400  
ctcaacacac aaacctagcc caaggcccac accaccggag acagaggaaa 450  
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cacagagggc agcatggaag agcccagaaa aagagaaaac catggtaaac 550  
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gatacagaaa aaagagcctg gatttacaga aacatataga tctggttga 2300  
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<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

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Gln	Trp	Ser	Leu	Leu	Leu	Ala	Val	Leu	Val	Phe	Phe	Leu	Phe	Ala
				20				25						30
Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
				35				40						45
Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
				50				55						60
Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile
				65				70						75
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr
				80				85						90
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn
				95				100						105

Gln Ala Pro Pro Glu Glu Gln Asp Lys Val Pro His Thr Ala Gln  
 110 115 120  
 Arg Ala Ala Trp Lys Ser Pro Glu Lys Glu Lys Thr Met Val Asn  
 125 130 135  
 Thr Leu Ser Pro Arg Gly Gln Asp Ala Gly Met Ala Ser Gly Arg  
 140 145 150  
 Thr Glu Ala Gln Ser Trp Lys Ser Gln Asp Thr Lys Thr Thr Gln  
 155 160 165  
 Gly Asn Gly Gly Gln Thr Arg Lys Leu Thr Ala Ser Arg Thr Val  
 170 175 180  
 Ser Glu Lys His Gln Gly Lys Ala Ala Thr Thr Ala Lys Thr Leu  
 185 190 195  
 Ile Pro Lys Ser Gln His Arg Met Leu Ala Pro Thr Gly Ala Val  
 200 205 210  
 Ser Thr Arg Thr Arg Gln Lys Gly Val Thr Thr Ala Val Ile Pro  
 215 220 225  
 Pro Lys Glu Lys Lys Pro Gln Ala Thr Pro Pro Pro Ala Pro Phe  
 230 235 240  
 Gln Ser Pro Thr Thr Gln Arg Asn Gln Arg Leu Lys Ala Ala Asn  
 245 250 255  
 Phe Lys Ser Glu Pro Arg Trp Asp Phe Glu Glu Lys Tyr Ser Phe  
 260 265 270  
 Glu Ile Gly Gly Leu Gln Thr Thr Cys Pro Asp Ser Val Lys Ile  
 275 280 285  
 Lys Ala Ser Lys Ser Leu Trp Leu Gln Lys Leu Phe Leu Pro Asn  
 290 295 300  
 Leu Thr Leu Phe Leu Asp Ser Arg His Phe Asn Gln Ser Glu Trp  
 305 310 315  
 Asp Arg Leu Glu His Phe Ala Pro Pro Phe Gly Phe Met Glu Leu  
 320 325 330  
 Asn Tyr Ser Leu Val Gln Lys Val Val Thr Arg Phe Pro Pro Val  
 335 340 345  
 Pro Gln Gln Gln Leu Leu Ala Ser Leu Pro Ala Gly Ser Leu  
 350 355 360  
 Arg Cys Ile Thr Cys Ala Val Val Gly Asn Gly Gly Ile Leu Asn  
 365 370 375  
 Asn Ser His Met Gly Gln Glu Ile Asp Ser His Asp Tyr Val Phe  
 380 385 390  
 Arg Leu Ser Gly Ala Leu Ile Lys Gly Tyr Glu Gln Asp Val Gly

395	400	405
Thr Arg Thr Ser Phe Tyr Gly Phe Thr Ala Phe Ser Leu Thr Gln		
410	415	420
Ser Leu Leu Ile Leu Gly Asn Arg Gly Phe Lys Asn Val Pro Leu		
425	430	435
Gly Lys Asp Val Arg Tyr Leu His Phe Leu Glu Gly Thr Arg Asp		
440	445	450
Tyr Glu Trp Leu Glu Ala Leu Leu Met Asn Gln Thr Val Met Ser		
455	460	465
Lys Asn Leu Phe Trp Phe Arg His Arg Pro Gln Glu Ala Phe Arg		
470	475	480
Glu Ala Leu His Met Asp Arg Tyr Leu Leu Leu His Pro Asp Phe		
485	490	495
Leu Arg Tyr Met Lys Asn Arg Phe Leu Arg Ser Lys Thr Leu Asp		
500	505	510
Gly Ala His Trp Arg Ile Tyr Arg Pro Thr Thr Gly Ala Leu Leu		
515	520	525
Leu Leu Thr Ala Leu Gln Leu Cys Asp Gln Val Ser Ala Tyr Gly		
530	535	540
Phe Ile Thr Glu Gly His Glu Arg Phe Ser Asp His Tyr Tyr Asp		
545	550	555
Thr Ser Trp Lys Arg Leu Ile Phe Tyr Ile Asn His Asp Phe Lys		
560	565	570
Leu Glu Arg Glu Val Trp Lys Arg Leu His Asp Glu Gly Ile Ile		
575	580	585
Arg Leu Tyr Gln Arg Pro Gly Pro Gly Thr Ala Lys Ala Lys Asn		
590	595	600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200

attcctgcat actataaaag atgcgccagg cttcttaccc ggctggctgt 250

cagtcctcgtg tgcatggagg ataagtgagc agaccgtaca ggagcagcac 300

accaggagcc atgagaagtgccttgaaac caacaggaa acagaactat 350  
ctttatacac atcccctcat ggacaagaga tttatTTTcagacagact 400  
cttccataag tccttgagt tttgtatgtt gttgacagtt tgcaGATA 450  
tattcgataa atcagtgtac ttgacagtgt tatctgtcac ttattt 496

<210> 349

<211> 91

<212> PRT

<213> Homo sapiens

<400> 349

Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val  
1 5 10 15

Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp  
20 25 30

Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu  
35 40 45

Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His  
50 55 60

Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala  
65 70 75

Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp  
80 85 90

Lys

<210> 350

<211> 1141

<212> DNA

<213> Homo sapiens

<400> 350

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gggggctccc ctggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200

ggaatggctc ctggcatccg gggTTTAact gcgagttctt caccttctgc 250

tgcgggacct gctaccatcg gtactgctgc agggacctga ccttgcttat 300

caccgagagg cagcagaAGC actgcctggc cttcagcccc aagaccatAG 350

caggcatcgc ctcagctgtg atcctctttg ttgctgtggc tgccaccacc 400

atctgctgct tcctctgttc ctgttgctac ctgtaccggcc ggccggcagca 450

gctccagagc ccatttgaag gccaggagat tccaatgaca ggcaccccag 500  
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&lt;210&gt; 351

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 351

Met	Pro	Pro	Ala	Gly	Leu	Arg	Arg	Ala	Ala	Pro	Leu	Thr	Ala	Ile
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Ala	Leu	Leu	Val	Leu	Gly	Ala	Pro	Leu	Val	Leu	Ala	Gly	Glu	Asp
									20				30	

Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe
									35				45	

Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg
									50				60	

Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln
									65				75	

Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala
									80				90	

Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys
									95				105	

Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln
									110				120	

Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile  
125 130 135  
Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly  
140 145 150  
Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro  
155 160 165  
Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn  
170 175 180  
Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro  
185 190 195  
Gly Ala

<210> 352  
<211> 3226  
<212> DNA  
<213> Homo sapiens

<400> 352  
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ctcaaatggt cccttgcAAC catgtcattt ctactttcct cactgttggc 150  
tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200  
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tcatcctcac attggcatca ggaaggggtg gatgtaaaaa ccatgatgaa 1650  
cacttggaca ctgcagaggg gttttccct aataaccatc acagtggaggg 1700  
ggaggaatgt acacatgaag caagagcact acatgaaggg ctctgacggc 1750  
gccccggaca ctgggtacct gtggcatgtt ccattgacat tcattcaccag 1800  
caaatccaac atggccatc gattttgct aaaaacaaaa acagatgtgc 1850  
tcatcctccc agaagaggtg gaatggatca aatttaatgt gggcatgaat 1900  
ggcttattaca ttgtgcatta cgaggatgat ggtggact ctttgactgg 1950  
ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000  
tcattaacaa tgcatttcag ctcgtcagca ttggaaagct gtccattgaa 2050  
aaggccttgg atttatccct gtacttgaaa catgaaaactg aaattatgcc 2100  
cgtgtttcaa ggtttgaatg agctgattcc tatgtataag ttaatggaga 2150  
aaagagatgt gaatgaagtg gaaactcaat tcaaggcctt cctcatcagg 2200  
ctgctaaggg acctcattga taagcagaca tggacagacg agggctcaagt 2250  
ctcagagcaa atgctgcgga gtgaactact actcctcgcc tgtgtgcaca 2300

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gaatccaatg gaaacttgag cctgcctgtc gacgtgacct tggcagtgtt 2400  
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ccacatggta atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750  
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tcgctaccat gtgtttgtt catcacaggt gttggccctgc aacgtaaacc 3150  
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aaaaaaaaaaaa aaaaaaaaaa aaaaaaa 3226

<210> 353

<211> 941

<212> PRT

<213> Homo sapiens

<400> 353

Met	Val	Phe	Leu	Pro	Leu	Lys	Trp	Ser	Leu	Ala	Thr	Met	Ser	Phe
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Leu	Leu	Ser	Ser	Leu	Leu	Ala	Leu	Leu	Thr	Val	Ser	Thr	Pro	Ser
				20				25				30		

Trp	Cys	Gln	Ser	Thr	Glu	Ala	Ser	Pro	Lys	Arg	Ser	Asp	Gly	Thr
				35				40				45		

Pro	Phe	Pro	Trp	Asn	Lys	Ile	Arg	Leu	Pro	Glu	Tyr	Val	Ile	Pro
				50				55				60		

Val	His	Tyr	Asp	Leu	Leu	Ile	His	Ala	Asn	Leu	Thr	Thr	Leu	Thr
				65				70				75		

Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr  
       80                         85                         90  
  
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala  
       95                         100                        105  
  
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu  
    110                         115                        120  
  
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala  
    125                         130                        135  
  
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His  
    140                         145                        150  
  
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser  
    155                         160                        165  
  
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr  
    170                         175                        180  
  
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp  
    185                         190                        195  
  
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu  
    200                         205                        210  
  
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val  
    215                         220                        225  
  
 Thr Val Ala Glu Gly Leu Ile Glu Asp His Phe Asp Val Thr Val  
    230                         235                        240  
  
 Lys Met Ser Thr Tyr Leu Val Ala Phe Ile Ile Ser Asp Phe Glu  
    245                         250                        255  
  
 Ser Val Ser Lys Ile Thr Lys Ser Gly Val Lys Val Ser Val Tyr  
    260                         265                        270  
  
 Ala Val Pro Asp Lys Ile Asn Gln Ala Asp Tyr Ala Leu Asp Ala  
    275                         280                        285  
  
 Ala Val Thr Leu Leu Glu Phe Tyr Glu Asp Tyr Phe Ser Ile Pro  
    290                         295                        300  
  
 Tyr Pro Leu Pro Lys Gln Asp Leu Ala Ala Ile Pro Asp Phe Gln  
    305                         310                        315  
  
 Ser Gly Ala Met Glu Asn Trp Gly Leu Thr Thr Tyr Arg Glu Ser  
    320                         325                        330  
  
 Ala Leu Leu Phe Asp Ala Glu Lys Ser Ser Ala Ser Ser Lys Leu  
    335                         340                        345  
  
 Gly Ile Thr Val Thr Val Ala His Glu Leu Ala His Gln Trp Phe  
    350                         355                        360  
  
 Gly Asn Leu Val Thr Met Glu Trp Trp Asn Asp Leu Trp Leu Asn

365	370	375
Glu Gly Phe Ala Lys Phe Met Glu Phe Val Ser Val Ser Val Thr		
380	385	390
His Pro Glu Leu Lys Val Gly Asp Tyr Phe Phe Gly Lys Cys Phe		
395	400	405
Asp Ala Met Glu Val Asp Ala Leu Asn Ser Ser His Pro Val Ser		
410	415	420
Thr Pro Val Glu Asn Pro Ala Gln Ile Arg Glu Met Phe Asp Asp		
425	430	435
Val Ser Tyr Asp Lys Gly Ala Cys Ile Leu Asn Met Leu Arg Glu		
440	445	450
Tyr Leu Ser Ala Asp Ala Phe Lys Ser Gly Ile Val Gln Tyr Leu		
455	460	465
Gln Lys His Ser Tyr Lys Asn Thr Lys Asn Glu Asp Leu Trp Asp		
470	475	480
Ser Met Ala Ser Ile Cys Pro Thr Asp Gly Val Lys Gly Met Asp		
485	490	495
Gly Phe Cys Ser Arg Ser Gln His Ser Ser Ser Ser His Trp		
500	505	510
His Gln Glu Gly Val Asp Val Lys Thr Met Met Asn Thr Trp Thr		
515	520	525
Leu Gln Arg Gly Phe Pro Leu Ile Thr Ile Thr Val Arg Gly Arg		
530	535	540
Asn Val His Met Lys Gln Glu His Tyr Met Lys Gly Ser Asp Gly		
545	550	555
Ala Pro Asp Thr Gly Tyr Leu Trp His Val Pro Leu Thr Phe Ile		
560	565	570
Thr Ser Lys Ser Asn Met Val His Arg Phe Leu Leu Lys Thr Lys		
575	580	585
Thr Asp Val Leu Ile Leu Pro Glu Glu Val Glu Trp Ile Lys Phe		
590	595	600
Asn Val Gly Met Asn Gly Tyr Tyr Ile Val His Tyr Glu Asp Asp		
605	610	615
Gly Trp Asp Ser Leu Thr Gly Leu Leu Lys Gly Thr His Thr Ala		
620	625	630
Val Ser Ser Asn Asp Arg Ala Ser Leu Ile Asn Asn Ala Phe Gln		
635	640	645
Leu Val Ser Ile Gly Lys Leu Ser Ile Glu Lys Ala Leu Asp Leu		
650	655	660

Ser Leu Tyr Leu Lys His Glu Thr Glu Ile Met Pro Val Phe Gln  
 665 670 675  
 Gly Leu Asn Glu Leu Ile Pro Met Tyr Lys Leu Met Glu Lys Arg  
 680 685 690  
 Asp Met Asn Glu Val Glu Thr Gln Phe Lys Ala Phe Leu Ile Arg  
 695 700 705  
 Leu Leu Arg Asp Leu Ile Asp Lys Gln Thr Trp Thr Asp Glu Gly  
 710 715 720  
 Ser Val Ser Glu Gln Met Leu Arg Ser Glu Leu Leu Leu Ala  
 725 730 735  
 Cys Val His Asn Tyr Gln Pro Cys Val Gln Arg Ala Glu Gly Tyr  
 740 745 750  
 Phe Arg Lys Trp Lys Glu Ser Asn Gly Asn Leu Ser Leu Pro Val  
 755 760 765  
 Asp Val Thr Leu Ala Val Phe Ala Val Gly Ala Gln Ser Thr Glu  
 770 775 780  
 Gly Trp Asp Phe Leu Tyr Ser Lys Tyr Gln Phe Ser Leu Ser Ser  
 785 790 795  
 Thr Glu Lys Ser Gln Ile Glu Phe Ala Leu Cys Arg Thr Gln Asn  
 800 805 810  
 Lys Glu Lys Leu Gln Trp Leu Leu Asp Glu Ser Phe Lys Gly Asp  
 815 820 825  
 Lys Ile Lys Thr Gln Glu Phe Pro Gln Ile Leu Thr Leu Ile Gly  
 830 835 840  
 Arg Asn Pro Val Gly Tyr Pro Leu Ala Trp Gln Phe Leu Arg Lys  
 845 850 855  
 Asn Trp Asn Lys Leu Val Gln Lys Phe Glu Leu Gly Ser Ser Ser  
 860 865 870  
 Ile Ala His Met Val Met Gly Thr Thr Asn Gln Phe Ser Thr Arg  
 875 880 885  
 Thr Arg Leu Glu Glu Val Lys Gly Phe Phe Ser Ser Leu Lys Glu  
 890 895 900  
 Asn Gly Ser Gln Leu Arg Cys Val Gln Gln Thr Ile Glu Thr Ile  
 905 910 915  
 Glu Glu Asn Ile Gly Trp Met Asp Lys Asn Phe Asp Lys Ile Arg  
 920 925 930  
 Val Trp Leu Gln Ser Glu Lys Leu Glu Arg Met  
 935 940

<211> 1587  
<212> DNA  
<213> Homo sapiens

<400> 354  
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tcatcctccc actgccagga gtgcaggcgc tgctctgcca gtttggaca 100  
gttcagcatg tgtgaaaggt gtccgaccta ccccggaat ggaccctaa 150  
gaacaccagc tgcgacagcg gttggggtg ccaggacacg ttgatgctca 200  
ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250  
gccaaggacc aggagccccg cgtcactgag cacggatgg gccccggcct 300  
ctccctgatc tcctacacct tcgtgtggc ccaggaggac ttctgcaaca 350  
acctcgtaa ctccctcccg ctttgggccc cacagcccc agcagaccca 400  
ggatccttga ggtgcccagt ctgcttgtct atggaaggct gtctggaggg 450  
gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500  
tcctcaggct caggggagga ggcattttt ccaatctgag agtccaggg 550  
tgcatgcccc agccaggttg caacctgctc aatgggacac agggaaattgg 600  
gcccgtgggt atgactgaga actgcaatag gaaagattt ctgacctgtc 650  
atcgaaaaac caccattatg acacacggaa acttggctca agaaccact 700  
gattggacca catgaatac cgagatgtgc gaggtggggc aggtgtgtca 750  
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caaaaaggctg cagcactgtt gggctaaaa attcccaagaa gaccaccatc 850  
cactcagccc ctccctgggt gttgtggcc tcctatacc acttctgctc 900  
ctcgacactg tgcaatagtg ccagcagcag cagcgttctg ctgaactccc 950  
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cagggcgcc actcattgtt atgatggta cattcatctc tcaggaggtg 1100  
ggctgtccac caaaatgagc attcagggt gctggccca accttccagc 1150  
ttcttgttga accacaccag acaaatcggt atcttctctg cgcgtgagaa 1200  
gcgtgatgtg cagcctcctg cctctcagca tgagggaggt ggggctgagg 1250  
gcctggagtc tctcaattgg ggggtggggc tggcaattggc cccagcgctg 1300  
tggggggag tggtttgcctt tcctgctaa ctctattacc cccacgattc 1350

ttcaccgctg ctgaccaccc acactcaacc tccctctgac ctcataacct 1400  
aatggccttg gacaccagat tcttcccat tctgtccatg aatcatcttc 1450  
ccccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500  
gcctggagca tccggacttg ccctatggga gaggggacgc tggaggagt 1550  
gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355  
<211> 437  
<212> PRT  
<213> Homo sapiens

<400> 355  
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Leu Pro Gly Val Gln Ala Leu Leu Cys Gln Phe Gly Thr Val Gln  
20 25 30  
His Val Trp Lys Val Ser Asp Leu Pro Arg Gln Trp Thr Pro Lys  
35 40 45  
Asn Thr Ser Cys Asp Ser Gly Leu Gly Cys Gln Asp Thr Leu Met  
50 55 60  
Leu Ile Glu Ser Gly Pro Gln Val Ser Leu Val Leu Ser Lys Gly  
65 70 75  
Cys Thr Glu Ala Lys Asp Gln Glu Pro Arg Val Thr Glu His Arg  
80 85 90  
Met Gly Pro Gly Leu Ser Leu Ile Ser Tyr Thr Phe Val Cys Arg  
95 100 105  
Gln Glu Asp Phe Cys Asn Asn Leu Val Asn Ser Leu Pro Leu Trp  
110 115 120  
Ala Pro Gln Pro Pro Ala Asp Pro Gly Ser Leu Arg Cys Pro Val  
125 130 135  
Cys Leu Ser Met Glu Gly Cys Leu Glu Gly Thr Thr Glu Glu Ile  
140 145 150  
Cys Pro Lys Gly Thr Thr His Cys Tyr Asp Gly Leu Leu Arg Leu  
155 160 165  
Arg Gly Gly Gly Ile Phe Ser Asn Leu Arg Val Gln Gly Cys Met  
170 175 180  
Pro Gln Pro Gly Cys Asn Leu Leu Asn Gly Thr Gln Glu Ile Gly  
185 190 195  
Pro Val Gly Met Thr Glu Asn Cys Asn Arg Lys Asp Phe Leu Thr  
200 205 210

Cys His Arg Gly Thr Thr Ile Met Thr His Gly Asn Leu Ala Gln  
 215 220 225  
 Glu Pro Thr Asp Trp Thr Thr Ser Asn Thr Glu Met Cys Glu Val  
 230 235 240  
 Gly Gln Val Cys Gln Glu Thr Leu Leu Leu Ile Asp Val Gly Leu  
 245 250 255  
 Thr Ser Thr Leu Val Gly Thr Lys Gly Cys Ser Thr Val Gly Ala  
 260 265 270  
 Gln Asn Ser Gln Lys Thr Thr Ile His Ser Ala Pro Pro Gly Val  
 275 280 285  
 Leu Val Ala Ser Tyr Thr His Phe Cys Ser Ser Asp Leu Cys Asn  
 290 295 300  
 Ser Ala Ser Ser Ser Val Leu Leu Asn Ser Leu Pro Pro Gln  
 305 310 315  
 Ala Ala Pro Val Pro Gly Asp Arg Gln Cys Pro Thr Cys Val Gln  
 320 325 330  
 Pro Leu Gly Thr Cys Ser Ser Gly Ser Pro Arg Met Thr Cys Pro  
 335 340 345  
 Arg Gly Ala Thr His Cys Tyr Asp Gly Tyr Ile His Leu Ser Gly  
 350 355 360  
 Gly Gly Leu Ser Thr Lys Met Ser Ile Gln Gly Cys Val Ala Gln  
 365 370 375  
 Pro Ser Ser Phe Leu Leu Asn His Thr Arg Gln Ile Gly Ile Phe  
 380 385 390  
 Ser Ala Arg Glu Lys Arg Asp Val Gln Pro Pro Ala Ser Gln His  
 395 400 405  
 Glu Gly Gly Ala Glu Gly Leu Glu Ser Leu Thr Trp Gly Val  
 410 415 420  
 Gly Leu Ala Leu Ala Pro Ala Leu Trp Trp Gly Val Val Cys Pro  
 425 430 435  
 Ser Cys

<210> 356  
 <211> 1238  
 <212> DNA  
 <213> Homo sapiens

<400> 356  
 gcgacgggca ggacgccccg ttcgccttagc gcgtgctcag gagttggtgt 50  
 cctgcctgct ctcaggatga gggggaatct ggccctggtg ggcgttctaa 100

tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagccggct 150  
ggcgatgacg cctgctctgt gcagatcctc gtccctggcc tcaaagggga 200  
tgcgggagag aaggagaca aaggcgcccc cgacggcct ggaagagtgc 250  
gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300  
gtgggtcgtc atggaaaaat tggtcccatt ggctctaaag gtgagaaagg 350  
agattccggt gacataggac cccctggtcc taatggagaa ccaggcctcc 400  
catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450  
gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500  
tgtgcgcgag acggagagca agatctacct gctggtaag gaggagaagc 550  
gctacgcgga cgcccgagctg tcctgccagg gccgcggggg cacgctgagc 600  
atgccaagg acgaggctgc caatggctg atggccgcat acctggcgca 650  
agccggcctg gcccgtgtct tcattggcat caacgacctg gagaaggagg 700  
gcgccttcgt gtactctgac cactccccca tgccgacctt caacaagtgg 750  
cgccaggctg agcccaacaa tgcctacgac gaggaggact gcgtggagat 800  
gttggcctcg ggccgctgga acgacgtggc ctgccacacc accatgtact 850  
tcattgtgtga gtttgcacaa gagaacatgt gagcctcagg ctggggctgc 900  
ccattggggg ccccacatgt ccctgcaggg ttggcaggga cagagccag 950  
accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000  
tgtagtagagg gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050  
aaaatgaaag tgttcctggg gtgctgtctc tgaagaagca gagtttcatt 1100  
acctgttattg tagccccaaat gtcattatgt aattattacc cagaattgct 1150  
cttccataaaa gcttgcgcct ttgtccaagc tatacaataa aatcttaag 1200  
tagtgcagta gttaagtcca aaaaaaaaaa aaaaaaaaa 1238

<210> 357  
<211> 271  
<212> PRT  
<213> Homo sapiens

<400> 357  
Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala  
1 5 10 15  
Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp  
20 25 30

Asp Ala Cys Ser Val Gln Ile Leu Val Pro Gly Leu Lys Gly Asp  
                   35                  40                  45  
 Ala Gly Glu Lys Gly Asp Lys Gly Ala Pro Gly Arg Pro Gly Arg  
                   50                  55                  60  
 Val Gly Pro Thr Gly Glu Lys Gly Asp Met Gly Asp Lys Gly Gln  
                   65                  70                  75  
 Lys Gly Ser Val Gly Arg His Gly Lys Ile Gly Pro Ile Gly Ser  
                   80                  85                  90  
 Lys Gly Glu Lys Gly Asp Ser Gly Asp Ile Gly Pro Pro Gly Pro  
                   95                  100                105  
 Asn Gly Glu Pro Gly Leu Pro Cys Glu Cys Ser Gln Leu Arg Lys  
                   110                115                120  
 Ala Ile Gly Glu Met Asp Asn Gln Val Ser Gln Leu Thr Ser Glu  
                   125               .                  130                135  
 Leu Lys Phe Ile Lys Asn Ala Val Ala Gly Val Arg Glu Thr Glu  
                   140                145                150  
 Ser Lys Ile Tyr Leu Leu Val Lys Glu Glu Lys Arg Tyr Ala Asp  
                   155                160                165  
 Ala Gln Leu Ser Cys Gln Gly Arg Gly Thr Leu Ser Met Pro  
                   170                175                180  
 Lys Asp Glu Ala Ala Asn Gly Leu Met Ala Ala Tyr Leu Ala Gln  
                   185                190                195  
 Ala Gly Leu Ala Arg Val Phe Ile Gly Ile Asn Asp Leu Glu Lys  
                   200                205                210  
 Glu Gly Ala Phe Val Tyr Ser Asp His Ser Pro Met Arg Thr Phe  
                   215                220                225  
 Asn Lys Trp Arg Ser Gly Glu Pro Asn Asn Ala Tyr Asp Glu Glu  
                   230                235                240  
 Asp Cys Val Glu Met Val Ala Ser Gly Gly Trp Asn Asp Val Ala  
                   245                250                255  
 Cys His Thr Thr Met Tyr Phe Met Cys Glu Phe Asp Lys Glu Asn  
                   260                265                270

Met

<210> 358  
 <211> 972  
 <212> DNA  
 <213> Homo sapiens

<400> 358  
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gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100  
gttccttgc cctgccagac cacccagccc ccggcacaga gctgctccac 150  
aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200  
tagctcagag ctggggct gtctgttaagg agccacagga ggaggtggtt 250  
cctggcgaaa gcccagcaa gagggatcca gatctctacc agctgctcca 300  
gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350  
gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400  
atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450  
gggaaagaca ggaccttct tacttcagt gagggttcct cggcccttc 500  
atcccaatca gcttggatcc acaggaaagt cttccctggg aacagaggag 550  
cagagacctt tataagactc tcctacggat gtgaatcaag agaacgtccc 600  
cagcttggc atcctcaagt atcccccgag agcagaatag gtactccact 650  
tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700  
caggtgcgca cgctcctgtt accctttctc ttccctgttc ttgtaacatt 750  
cttgtgttt gactccttct ccatctttc tacctgaccc tggtgtggaa 800  
actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaataacc 850  
ctagagttcc tgttagtgtcc tacattaaaa atataatgtc tctctctatt 900  
cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950  
aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359  
<211> 135  
<212> PRT  
<213> Homo sapiens

<400> 359  
Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu  
1 5 10 15  
Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val  
20 25 30  
Val Pro Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln  
35 40 45  
Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu  
50 55 60  
Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr  
65 70 75

Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met  
80 85 90

Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu  
95 100 105

Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly  
110 115 120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu  
125 130 135

<210> 360

<211> 1738

<212> DNA

<213> Homo sapiens

<400> 360

gggcgtctcc ggctgctcct attgagctgt ctgctcgctg tgcccgctgt 50

gcctgctgtg cccgcgtgt cgccgctgct accgcgtctg ctggacgcgg 100

gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcgccc 150

agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200

ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250

ctgttcctgg tctgcggatc ccaaggctac ctcctgccc acgtcactct 300

cttagaggag ctgctcagca aataccagca caacgagtct cactcccgaa 350

tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400

aacaagcttc gggccaggt gcagcctcag gcctccaaca tggagtacat 450

ggtgagcggc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500

gccaccagcc tgctctgttc cccagccagc tctgttcccc agccagtgcg 550

tgtatggct ggctcagggt ctccctgtgc aggggaggat cccggctctg 600

ttctgttttg ttgtttgtt ttgagacagg gtctcactct gccactgacg 650

ctggagtgca atggcacaat cgtcatgccc tgaaacctta gactcccgaa 700

gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750

accatggtgtc ccagctagat tttaaatatt ttgtggagat gggggcttg 800

ctacgttgcc caggctggtc ttgaactcct aggctcaagc aatcctcctg 850

cctcagcctc tcaaagtgct aggattatacg gcatgagtc ccctgtctgg 900

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gtgcagagcc tgccctcggtt cttcatgtc actcttggta gctccactgg 1000

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<210> 361

<211> 159

<212> PRT

<213> Homo sapiens

<400> 361

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Leu	Val	Cys	Gly	Ser	Gln	Gly	Tyr	Leu	Leu	Pro	Asn	Val	Thr	Leu
				20					25					30

Leu	Glu	Glu	Leu	Leu	Ser	Lys	Tyr	Gln	His	Asn	Glu	Ser	His	Ser
					35				40					45

Arg	Val	Arg	Arg	Ala	Ile	Pro	Arg	Glu	Asp	Lys	Glu	Glu	Ile	Leu
					50				55					60

Met	Leu	His	Asn	Lys	Leu	Arg	Gly	Gln	Val	Gln	Pro	Gln	Ala	Ser
						65			70					75

Asn	Met	Glu	Tyr	Met	Val	Ser	Ala	Gly	Ser	Gly	Arg	Arg	Gly	Trp
					80				85					90

His	Arg	Gly	Trp	Gly	Leu	Gly	His	Gln	Pro	Ala	Leu	Phe	Pro	Ser
					95				100					105

Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val

110	115	120
Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val		
125	130	135
Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln		
140	145	150
Trp His Asn Arg His Ala Leu Lys Pro		
155		

<210> 362  
<211> 422  
<212> DNA  
<213> *Homo sapiens*

<400> 362  
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gcagctcaca tggAACAGGG ccgggtatga ctttgcact gaagctgaag 150  
gagtctttc tgacaaattc ctccatgag tccagcttcc tggaaattgct 200  
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ggcaggcccc gaccctgtct ttcaGCAGGC cccCACCCtC ctgagtggca 400  
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<210> 363  
<211> 78  
<212> PRT  
<213> *Homo sapiens*

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<400> 363
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Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
      20          25          30

Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
      35          40          45

Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
      50          55          60

Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val

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<210> 364  
<211> 826  
<212> DNA  
<213> Homo sapiens

<400> 364  
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attgcagaag ctccattcag tggatgttattt aatatttacc 250  
cctcttacgc atatgttaca aattatctgg agttcctaattt caatgcagag 300  
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aaaaggcatg tattttaaatc tttttttttt tttttttttt 400  
aagggttccttg aaagccaatg gaaataacttt tttttttttt tggcactaat 450  
caagtgagtg ttacccccc acttagttagg atgtgttgc acgcttagaa 500  
aatagaaacc tttttttttt tttttttttt tttttttttt 550  
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accagaataa aagttcatat ctaccc 826

<210> 365  
<211> 67  
<212> PRT  
<213> Homo sapiens

<400> 365  
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20 25 30  
Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg  
35 40 45  
Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro  
50 55 60

Leu Pro Ser Asp Cys Ser Lys  
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<210> 366  
<211> 2475  
<212> DNA  
<213> Homo sapiens

<400> 366  
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ttttgcagga tgatggtggc ctttcgagga gcttctgcat tgctggttct 150  
gttccttgca gctttctgc ccccgcgc a gtgtacccag gaccgcacca 200  
tggtgcatta catctaccag cgcttcgag tcttggagca agggctggaa 250  
aaatgtaccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300  
aaaaaatata tctgtcatgc tggaaagatg tcagacctac acaagtgagt 350  
acaagagtgc agtggtaac ttggcactga gagttgaacg tgcccaacgg 400  
gagattgact acatacaata ctttcgagag gctgacgagt gcacgtatc 450  
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<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe  
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Leu	Ala	Ala	Phe	Leu	Pro	Pro	Pro	Gln	Cys	Thr	Gln	Asp	Pro	Ala
				20					25					30
Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly
				35					40					45
Leu	Glu	Lys	Cys	Thr	Gln	Ala	Thr	Arg	Ala	Tyr	Ile	Gln	Glu	Phe
				50					55					60
Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln
				65					70					75
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu
				80					85					90
Arg	Val	Glu	Arg	Ala	Gln	Arg	Glu	Ile	Asp	Tyr	Ile	Gln	Tyr	Leu
				95					100					105
Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala
				110					115					120
Glu	Met	Leu	Leu	Gln	Glu	Ala	Glu	Glu	Glu	Lys	Lys	Ile	Arg	Thr
				125					130					135
Leu	Leu	Asn	Ala	Ser	Cys	Asp	Asn	Met	Leu	Met	Gly	Ile	Lys	Ser
				140					145					150
Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met
				155					160					165
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly
				170					175					180
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe
				185					190					195
Met	Glu	Asp	Asn	Thr	Lys	Pro	Ala	Pro	Arg	Lys	Gln	Ile	Leu	Thr
				200					205					210
Leu	Ser	Trp	Gln	Gly	Thr	Gly	Gln	Val	Ile	Tyr	Lys	Gly	Phe	Leu
				215					220					225
Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn
				230					235					240
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly
				245					250					255
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile
				260					265					270
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly
				275					280					285
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly
				290					295					300
Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln

305	310	315
Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val		
320	325	330
Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr		
335	340	345
Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe		
350	355	360
Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro		
365	370	375
Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile		
380	385	390
Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys		
395	400	

<210> 368  
<211> 2281  
<212> DNA  
<213> Homo sapiens

<400> 368  
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aaaaaaaaaaa aaaaaaaaaaa aaaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met Glu Leu Ser Gln Met Ser Glu Leu Met Gly Leu Ser Val Leu  
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Leu Gly Leu Leu Ala Leu Met Ala Thr Ala Ala Val Ala Arg Gly  
20 25 30

Trp Leu Arg Ala Gly Glu Glu Arg Ser Gly Arg Pro Ala Cys Gln  
35 40 45

Lys Ala Asn Gly Phe Pro Pro Asp Lys Ser Ser Gly Ser Lys Lys  
50 55 60

Gln Lys Gln Tyr Gln Arg Ile Arg Lys Glu Lys Pro Gln Gln His  
65 70 75

Asn Phe Thr His Arg Leu Leu Ala Ala Ala Leu Lys Ser His Ser  
80 85 90

Gly Asn Ile Ser Cys Met Asp Phe Ser Ser Asn Gly Lys Tyr Leu  
95 100 105

Ala Thr Cys Ala Asp Asp Arg Thr Ile Arg Ile Trp Ser Thr Lys  
110 115 120

Asp Phe Leu Gln Arg Glu His Arg Ser Met Arg Ala Asn Val Glu  
125 130 135

Leu Asp His Ala Thr Leu Val Arg Phe Ser Pro Asp Cys Arg Ala  
140 145 150

Phe Ile Val Trp Leu Ala Asn Gly Asp Thr Leu Arg Val Phe Lys  
155 160 165

Met Thr Lys Arg Glu Asp Gly Gly Tyr Thr Phe Thr Ala Thr Pro  
170 175 180

Glu Asp Phe Pro Lys Lys His Lys Ala Pro Val Ile Asp Ile Gly  
185 190 195

Ile Ala Asn Thr Gly Lys Phe Ile Met Thr Ala Ser Ser Asp Thr  
200 205 210

Thr Val Leu Ile Trp Ser Leu Lys Gly Gln Val Leu Ser Thr Ile  
215 220 225

Asn Thr Asn Gln Met Asn Asn Thr His Ala Ala Val Ser Pro Cys  
230 235 240

Gly Arg Phe Val Ala Ser Cys Gly Phe Thr Pro Asp Val Lys Val  
245 250 255

Trp Glu Val Cys Phe Gly Lys Lys Gly Glu Phe Gln Glu Val Val  
 260 265 270  
 Arg Ala Phe Glu Leu Lys Gly His Ser Ala Ala Val His Ser Phe  
 275 280 285  
 Ala Phe Ser Asn Asp Ser Arg Arg Met Ala Ser Val Ser Lys Asp  
 290 295 300  
 Gly Thr Trp Lys Leu Trp Asp Thr Asp Val Glu Tyr Lys Lys Lys  
 305 310 315  
 Gln Asp Pro Tyr Leu Leu Lys Thr Gly Arg Phe Glu Glu Ala Ala  
 320 325 330  
 Gly Ala Ala Pro Cys Arg Leu Ala Leu Ser Pro Asn Ala Gln Val  
 335 340 345  
 Leu Ala Leu Ala Ser Gly Ser Ser Ile His Leu Tyr Asn Thr Arg  
 350 355 360  
 Arg Gly Glu Lys Glu Glu Cys Phe Glu Arg Val His Gly Glu Cys  
 365 370 375  
 Ile Ala Asn Leu Ser Phe Asp Ile Thr Gly Arg Phe Leu Ala Ser  
 380 385 390  
 Cys Gly Asp Arg Ala Val Arg Leu Phe His Asn Thr Pro Gly His  
 395 400 405  
 Arg Ala Met Val Glu Glu Met Gln Gly His Leu Lys Arg Ala Ser  
 410 415 420  
 Asn Glu Ser Thr Arg Gln Arg Leu Gln Gln Gln Leu Thr Gln Ala  
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 Gln Glu Thr Leu Lys Ser Leu Gly Ala Leu Lys Lys  
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<210> 370  
 <211> 1415  
 <212> DNA  
 <213> Homo sapiens

<400> 370  
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 ccacgcgagt ctcaatcatg ctccctcttag taactgtgtc tgactgtgct 150  
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ccagtccta cactgactac cctgatctct cttgtctagt acgcacatat 550  
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gaggatgtca cagttgagg ctgtggtgtg aaaggtggcc agcctggttc 650  
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accacactt accagttaac cactgaagcc cccaattccc acagctttc 1150  
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agaaggcaat tagggtgttt ccttaaacaa ctccttcca aggatcagcc 1250  
ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300  
ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350  
tcagaccagg gaggcaacta cacaccaaca tgctggctt agaataaaag 1400  
caccaactga aaaaa 1415

<210> 371

<211> 105

<212> PRT

<213> Homo sapiens

<400> 371

Met	Arg	Gly	Ala	Thr	Arg	Val	Ser	Ile	Met	Leu	Leu	Leu	Val	Thr
1														15

Val	Ser	Asp	Cys	Ala	Val	Ile	Thr	Gly	Ala	Cys	Glu	Arg	Asp	Val
20														30

Gln	Cys	Gly	Ala	Gly	Thr	Cys	Cys	Ala	Ile	Ser	Leu	Trp	Leu	Arg
35														45

Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys  
50 55 60

His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His  
65 70 75

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro  
80 85 90

Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe  
95 100 105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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gaaatgtctt tcctccagga cccaagtttc ttcaccatgg ggatgtggtc 100

cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150

acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200

gaggatatacg acctgaaaaac actggagaag gaaccaagga ctttcaaagc 250

aaaggagcta tggaaaaaaa atggagctgt gattatggcc gtgcggaggc 300

caggctgttt cctctgtcga gaggaagctg cgatctgtc ctccctgaaa 350

agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400

catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450

tcctggatga aaagaaaaag ttctatggtc cacaaaggcg gaagatgtatg 500

tttatggat ttatccgtct gggagtgtgg tacaacttct tccgagcctg 550

gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600

gagtttcgt ggtggatca gaaaggcagg gcattcttct tgagcacccga 650

aaaaaagaat ttggagacaa agtaaaccta ctttctgttc tgaaagctgc 700

taagatgatc aaaccacaga ctttggcctc agaaaaaaa tgattgtgtg 750

aaactgcccac gtcagggat aaccaggac attcacctgt gttcatggga 800

tgtattgttt ccactcggtc ccctaaggag tgagaaaccc atttataactc 850

tactctcagt atggatttatt aatgtatattt aatattctgt ttaggcccac 900

taaggcaaaa tagccccaaa acaagactga caaaaatctg aaaaactaat 950

gaggatttatt aagctaaaac ctggaaataa ggaggcttaa aattgactgc 1000

caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050  
aaggtgagca agtcacttga ggtcgggagt tcgagaccag cctgagcaac 1100  
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ggcaggcacc tgttagtccca gctacccggg aggctgaggc aggagaatca 1200  
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<210> 373

<211> 229

<212> PRT

<213> Homo sapiens

<400> 373

Met	Ser	Phe	Leu	Gln	Asp	Pro	Ser	Phe	Phe	Thr	Met	Gly	Met	Trp
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Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20				25					30	
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35				40					45	
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50				55					60	
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65				70					75	
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80				85					90	
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95				100					105	
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110				115					120	
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125				130					135	
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140				145					150	
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155				160					165	
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170				175					180	
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185				190					195	
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu

200

205

210

Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala  
215 220 225

Ser Glu Lys Lys

<210> 374

<211> 744

<212> DNA

<213> Homo sapiens

<400> 374

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gccacccagc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200  
cctgcccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250  
ccacttctgc aaatgagaat agcactgtt tgccttcattc caccagctcc 300  
agctccgatg gcaacctgctg tccggaagcc atcactgcta tcattcgttgt 350  
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tgccgaaagct tcgggagaag cggcagacgg agggcaccta ccggcccaagt 450  
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caaggagacg gtgcagggtct gcctgcccc catggtcccc tctcctgcatt 550  
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ggcagtcag atccacccag tgcttaatag cagggaaagaa ggtacttcaa 650  
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tttatataaaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

Met Ala Asn Pro Gly Leu Gly Leu Leu Leu Ala Leu Gly Leu Pro  
1 5 10 15

Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr  
20 25 30

Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser  
35 40 45

Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile  
50 55 60

Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Leu Ala Val Gly  
65 70 75

Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu  
80 85 90

Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala  
95 100 105

Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys  
110 115 120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376

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aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100

tttctgtcac tattattatt gttggatgt gaagctattt ggagatccaa 150

ttcaggaagc aacacattgg agaatggcta ctttctatca agaaataaag 200

agaaccacag tcaacccaca caatcatctt tagaagacag tgtgactcct 250

acccaaagctg tcaaaaaccac aggcaagggc atagttaaag gacggaatct 300

tgactcaaga gggtaattc ttggtgctga agcctggggc aggggtgtaa 350

agaaaaaacac ttagattcaa tgattgtaaa tttaaggcaa atacacatat 400

tagtattacc ttagtgtaat gtatccctgt catatataca ataaggtgaa 450

attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500

taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550

acaggagatc atataatttg atacaataa aagaaaaagtg ttctctcccc 600

ttacagaatt gacatttaa atgcgataca gttagaatag gaaatatgac 650

attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttgcc 700

aaggaaaaaaaaaaa aaa 713

<210> 377

<211> 90

<212> PRT

<213> Homo sapiens

<400> 377  
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20 25 30  
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser  
35 40 45  
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr  
50 55 60  
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu  
65 70 75  
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr  
80 85 90

<210> 378  
<211> 3265  
<212> DNA  
<213> Homo sapiens

<400> 378  
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cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcatthaagc 100  
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ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200  
ttctacgtac ctgttgaag ccacagaaaa aagattttt ttcaaaaatg 250  
tatctatatt aattcctgag aatttgaagg aaaatcctca gtacaaaagg 300  
ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350  
actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400  
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cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550  
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ggtagaaata gagttataa gtgtcaagga ggcagctgac ttagtagagc 650  
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aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150  
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<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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					20				25				30	

Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
								35		40			45	

Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
								50		55			60	

Thr Tyr Leu Phe Glu Ala Thr Glu Lys Arg Phe Phe Phe Lys Asn  
                   65                 70                 75  
 Val Ser Ile Leu Ile Pro Glu Asn Trp Lys Glu Asn Pro Gln Tyr  
                   80                 85                 90  
 Lys Arg Pro Lys His Glu Asn His Lys His Ala Asp Val Ile Val  
                   95                 100                105  
 Ala Pro Pro Thr Leu Pro Gly Arg Asp Glu Pro Tyr Thr Lys Gln  
                  110                115                120  
 Phe Thr Glu Cys Gly Glu Lys Gly Glu Tyr Ile His Phe Thr Pro  
                  125                130                135  
 Asp Leu Leu Leu Gly Lys Lys Gln Asn Glu Tyr Gly Pro Pro Gly  
                  140                145                150  
 Lys Leu Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe  
                  155                160                165  
 Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Arg Ala Lys Ser Lys  
                  170                175                180  
 Lys Ile Glu Ala Thr Arg Cys Ser Ala Gly Ile Ser Gly Arg Asn  
                  185                190                195  
 Arg Val Tyr Lys Cys Gln Gly Gly Ser Cys Leu Ser Arg Ala Cys  
                  200                205                210  
 Arg Ile Asp Ser Thr Thr Lys Leu Tyr Gly Lys Asp Cys Gln Phe  
                  215                220                225  
 Phe Pro Asp Lys Val Gln Thr Glu Lys Ala Ser Ile Met Phe Met  
                  230                235                240  
 Gln Ser Ile Asp Ser Val Val Glu Phe Cys Asn Glu Lys Thr His  
                  245                250                255  
 Asn Gln Glu Ala Pro Ser Leu Gln Asn Ile Lys Cys Asn Phe Arg  
                  260                265                270  
 Ser Thr Trp Glu Val Ile Ser Asn Ser Glu Asp Phe Lys Asn Thr  
                  275                280                285  
 Ile Pro Met Val Thr Pro Pro Pro Pro Val Phe Ser Leu Leu  
                  290                295                300  
 Lys Ile Ser Gln Arg Ile Val Cys Leu Val Leu Asp Lys Ser Gly  
                  305                310                315  
 Ser Met Gly Gly Lys Asp Arg Leu Asn Arg Met Asn Gln Ala Ala  
                  320                325                330  
 Lys His Phe Leu Leu Gln Thr Val Glu Asn Gly Ser Trp Val Gly  
                  335                340                345  
 Met Val His Phe Asp Ser Thr Ala Thr Ile Val Asn Lys Leu Ile

DRAFT - DO NOT CITE

350	355	360
Gln Ile Lys Ser Ser Asp Glu Arg Asn Thr Leu Met Ala Gly Leu		
365	370	375
Pro Thr Tyr Pro Leu Gly Gly Thr Ser Ile Cys Ser Gly Ile Lys		
380	385	390
Tyr Ala Phe Gln Val Ile Gly Glu Leu His Ser Gln Leu Asp Gly		
395	400	405
Ser Glu Val Leu Leu Leu Thr Asp Gly Glu Asp Asn Thr Ala Ser		
410	415	420
Ser Cys Ile Asp Glu Val Lys Gln Ser Gly Ala Ile Val His Phe		
425	430	435
Ile Ala Leu Gly Arg Ala Ala Asp Glu Ala Val Ile Glu Met Ser		
440	445	450
Lys Ile Thr Gly Gly Ser His Phe Tyr Val Ser Asp Glu Ala Gln		
455	460	465
Asn Asn Gly Leu Ile Asp Ala Phe Gly Ala Leu Thr Ser Gly Asn		
470	475	480
Thr Asp Leu Ser Gln Lys Ser Leu Gln Leu Glu Ser Lys Gly Leu		
485	490	495
Thr Leu Asn Ser Asn Ala Trp Met Asn Asp Thr Val Ile Ile Asp		
500	505	510
Ser Thr Val Gly Lys Asp Thr Phe Phe Leu Ile Thr Trp Asn Ser		
515	520	525
Leu Pro Pro Ser Ile Ser Leu Trp Asp Pro Ser Gly Thr Ile Met		
530	535	540
Glu Asn Phe Thr Val Asp Ala Thr Ser Lys Met Ala Tyr Leu Ser		
545	550	555
Ile Pro Gly Thr Ala Lys Val Gly Thr Trp Ala Tyr Asn Leu Gln		
560	565	570
Ala Lys Ala Asn Pro Glu Thr Leu Thr Ile Thr Val Thr Ser Arg		
575	580	585
Ala Ala Asn Ser Ser Val Pro Pro Ile Thr Val Asn Ala Lys Met		
590	595	600
Asn Lys Asp Val Asn Ser Phe Pro Ser Pro Met Ile Val Tyr Ala		
605	610	615
Glu Ile Leu Gln Gly Tyr Val Pro Val Leu Gly Ala Asn Val Thr		
620	625	630
Ala Phe Ile Glu Ser Gln Asn Gly His Thr Glu Val Leu Glu Leu		
635	640	645

Leu Asp Asn Gly Ala Gly Ala Asp Ser Phe Lys Asn Asp Gly Val  
650 655 660

Tyr Ser Arg Tyr Phe Thr Ala Tyr Thr Glu Asn Gly Arg Tyr Ser  
665 670 675

Leu Lys Val Arg Ala His Gly Gly Ala Asn Thr Ala Arg Leu Lys  
680 685 690

Leu Arg Pro Pro Leu Asn Arg Ala Ala Tyr Ile Pro Gly Trp Val  
695 700 705

Val Asn Gly Glu Ile Glu Ala Asn Pro Pro Arg Pro Glu Ile Asp  
710 715 720

Glu Asp Thr Gln Thr Thr Leu Glu Asp Phe Ser Arg Thr Ala Ser  
725 730 735

Gly Gly Ala Phe Val Val Ser Gln Val Pro Ser Leu Pro Leu Pro  
740 745 750

Asp Gln Tyr Pro Pro Ser Gln Ile Thr Asp Leu Asp Ala Thr Val  
755 760 765

His Glu Asp Lys Ile Ile Leu Thr Trp Thr Ala Pro Gly Asp Asn  
770 775 780

Phe Asp Val Gly Lys Val Gln Arg Tyr Ile Ile Arg Ile Ser Ala  
785 790 795

Ser Ile Leu Asp Leu Arg Asp Ser Phe Asp Asp Ala Leu Gln Val  
800 805 810

Asn Thr Thr Asp Leu Ser Pro Lys Glu Ala Asn Ser Lys Glu Ser  
815 820 825

Phe Ala Phe Lys Pro Glu Asn Ile Ser Glu Glu Asn Ala Thr His  
830 835 840

Ile Phe Ile Ala Ile Lys Ser Ile Asp Lys Ser Asn Leu Thr Ser  
845 850 855

Lys Val Ser Asn Ile Ala Gln Val Thr Leu Phe Ile Pro Gln Ala  
860 865 870

Asn Pro Asp Asp Ile Asp Pro Thr Pro Thr Pro Thr Pro Thr Pro  
875 880 885

Thr Pro Asp Lys Ser His Asn Ser Gly Val Asn Ile Ser Thr Leu  
890 895 900

Val Leu Ser Val Ile Gly Ser Val Val Ile Val Asn Phe Ile Leu  
905 910 915

Ser Thr Thr Ile

<211> 3877  
<212> DNA  
<213> Homo sapiens

<400> 380  
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ctcggtgtg gctgccttcc tatttcaagg aaagacgcca aggttaattt 150  
gaccaggagg agcaatgatg tagccaccc ctaaccttcc cttcttgaac 200  
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caatcaccgt ctttacacgg cctctgattt catagaaggat 1300  
cagaaaggga caaaggaca ttgttatgac tcaccccaa aggggaccac 1350

DRAFT

aaacacgaat tcaaacggct catcttattt cgaccattca gccccatcat 1400  
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tcgtgcctct agcaaaaagg gtggacaagt tccggcagtt catgcagaat 1500  
ttcagggaga tgtgcattga gcaggatggg agagtccatc tcactgttgt 1550  
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<210> 381  
<211> 532  
<212> PRT  
<213> Homo sapiens

<400> 381  
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Val Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr  
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Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu  
35 40 45

Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val  
                   50                      55                      60  
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu  
                   65                      70                      75  
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser  
                   80                      85                      90  
 Glu Gln Leu Arg Asn Gly Gln Tyr Gln Ala Ser Asp Ala Ala Gly  
                   95                      100                    105  
 Leu Gly Leu Asp Arg Ser Pro Pro Glu Lys Thr Gln Ala Asp Leu  
                   110                      115                    120  
 Leu Ala Phe Leu His Ser Gln Val Asp Lys Ala Glu Val Asn Ala  
                   125                      130                    135  
 Gly Val Lys Leu Ala Thr Glu Tyr Ala Ala Val Pro Phe Asp Ser  
                   140                      145                    150  
 Phe Thr Leu Gln Lys Val Tyr Gln Leu Glu Thr Gly Leu Thr Arg  
                   155                      160                    165  
 His Pro Glu Glu Lys Pro Val Arg Lys Asp Lys Arg Asp Glu Leu  
                   170                      175                    180  
 Val Glu Ala Ile Glu Ser Ala Leu Glu Thr Leu Asn Asn Pro Ala  
                   185                      190                    195  
 Glu Asn Ser Pro Asn His Arg Pro Tyr Thr Ala Ser Asp Phe Ile  
                   200                      205                    210  
 Glu Gly Ile Tyr Arg Thr Glu Arg Asp Lys Gly Thr Leu Tyr Glu  
                   215                      220                    225  
 Leu Thr Phe Lys Gly Asp His Lys His Glu Phe Lys Arg Leu Ile  
                   230                      235                    240  
 Leu Phe Arg Pro Phe Ser Pro Ile Met Lys Val Lys Asn Glu Lys  
                   245                      250                    255  
 Leu Asn Met Ala Asn Thr Leu Ile Asn Val Ile Val Pro Leu Ala  
                   260                      265                    270  
 Lys Arg Val Asp Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu  
                   275                      280                    285  
 Met Cys Ile Glu Gln Asp Gly Arg Val His Leu Thr Val Val Tyr  
                   290                      295                    300  
 Phe Gly Lys Glu Glu Ile Asn Glu Val Lys Gly Ile Leu Glu Asn  
                   305                      310                    315  
 Thr Ser Lys Ala Ala Asn Phe Arg Asn Phe Thr Phe Ile Gln Leu  
                   320                      325                    330  
 Asn Gly Glu Phe Ser Arg Gly Lys Gly Leu Asp Val Gly Ala Arg

335                    340                    345

Phe Trp Lys Gly Ser Asn Val Leu Leu Phe Phe Cys Asp Val Asp  
350                    355                    360

Ile Tyr Phe Thr Ser Glu Phe Leu Asn Thr Cys Arg Leu Asn Thr  
365                    370                    375

Gln Pro Gly Lys Lys Val Phe Tyr Pro Val Leu Phe Ser Gln Tyr  
380                    385                    390

Asn Pro Gly Ile Ile Tyr Gly His His Asp Ala Val Pro Pro Leu  
395                    400                    405

Glu Gln Gln Leu Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp  
410                    415                    420

Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn  
425                    430                    435

Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp  
440                    445                    450

Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val  
455                    460                    465

Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Glu Lys Arg  
470                    475                    480

Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln  
485                    490                    495

Ser Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu  
500                    505                    510

Val Phe Arg His Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln  
515                    520                    525

Lys Thr Ser Ser Lys Lys Thr  
530

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe  
<400> 383  
gcgaaggta gccttatct cgtgcc 26

<210> 384  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
<400> 384  
cagcctacac gtattgagg 19

<210> 385  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
<400> 385  
cagtcagtac aatcctggca taatatacgg ccaccatgat gcagtccc 48

<210> 386  
<211> 1346  
<212> DNA  
<213> Homo sapiens

<400> 386  
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gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150  
ctcttcaaag cgatggtagc tttctccatg agaaaagttc ccaacagaga 200  
agcaacagaa atttcccatg tcctactttg caatgtaacc cagagggtat 250  
cattctggtt tgtggttaca gacccttcaa aaaatcacac ctttcctgct 300  
gtttaggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350  
cttctttcta aatgacccaa ctctggatt tttaaaaatc cttccacac 400  
ttgcaccacc catggaccca tctgtgccc tctggattat tatatttggt 450  
gtgatatttt gcatcatcat agttgcaatt gcactactga ttttatcagg 500  
gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550  
ctgaagataa gtgtgaaaac atgatcacaa ttgaaaatgg catccccctct 600  
gatccccctgg acatgaaggg gggcatatta atgatgcctt catgacagag 650

gatgagaggc tcaccctct ctgaaggct gttgtctgc ttccctaaga 700  
aattaaacat ttgttctgt gtgactgctg agcatcctga aataccaaga 750  
gcagatcata tatttgaaa caccattctt cttttgtaat aaatttgaa 800  
tgtgcttcaa agtggaaagc aatcaattat acccaccaac accactgaaa 850  
tcataagcta ttcacgactc aaaatattct aaaatatttt tctgacagta 900  
tagtgtataa atgtggtcat gtggatttg tagttattga tttaaggcatt 950  
tttagaaata agatcaggca tatgtatata ttttcacact tcaaagacct 1000  
aaggaaaaat aaatttcca gtggagaata catataatat ggtgtagaaa 1050  
tcattgaaaa tggatcctt ttgacgatca cttatatcac tctgtatatg 1100  
actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150  
tggaattact catatacagg gtggatttt atcctgttat cacaccaaca 1200  
gttgattata tatttctga atatcagccc ctaataggac aattctattt 1250  
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agtaataatc atctttttt aaaaaaaaaa aaaaaaaaaa aaaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met	Leu	Trp	Leu	Leu	Phe	Phe	Leu	Val	Thr	Ala	Ile	His	Ala	Glu
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Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser
					20				25					30
Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn
					35				40					45
Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys
					50				55					60
Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys
					65				70					75
Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro
					80				85					90
Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile
					95				100					105
Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp
					110				115					120

Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro  
125 130 135  
Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile  
140 145 150  
Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly  
155 160 165  
Ile Trp Gln Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp  
170 175 180  
Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly  
185 190 195  
Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met  
200 205 210  
Pro Ser

<210> 388  
<211> 1371  
<212> DNA  
<213> Homo sapiens

<400> 388  
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gccaggctg gtttccctc atgtatggca agagctctac tcgtgcggtg 150  
cttccttctcc ttggcataaca gtcacagct ctttggccta tagcagctgt 200  
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acactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600  
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aatcaaaaaga agagggaaagg ctcaaccaag agaaaaaggt ctctgttat 750  
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acagtaaattc ctaaattcaa actgttaaat gacatttttta ttttatgtc 1300  
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ccaggtgata gattttgtc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met	Tyr	Gly	Lys	Ser	Ser	Thr	Arg	Ala	Val	Leu	Leu	Leu	Gly	
1				5					10				15	
Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr
		20						25				30		
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu
		35						40				45		
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr
			50					55				60		
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe
		65					70					75		
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg
			80					85				90		
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp
		95						100				105		
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr
		110						115				120		
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile
			125					130				135		
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu

(

140	145	150
Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met 155	160	165
Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys 170	175	180
Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser 185	190	195
Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr 200	205	210
Leu Glu Asp Thr Asp 215		

<210> 390  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 390  
ccgaggccat ctagaggcca gagc 24

<210> 391  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 391  
acaggcagag ccaatggcca gagc 24

<210> 392  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 392  
gagaggactg cgggagtttg ggaccttgt gcagacgtgc tcattg 45

<210> 393  
<211> 471  
<212> DNA  
<213> Homo sapiens

<400> 393  
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atccgacaac agctgctcca gctgacacgt atccagctac tggtcctgct 150  
gatgatgaag cccctgatgc taaaaccact gctgctgcaa ccactgcgac 200  
caactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250  
aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300  
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350  
tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400  
cccccttatac tctaatacgt ttatTTCTT tcaaataaaa aataactatg 450  
agcaacataa aaaaaaaaaa a 471

<210> 394

<211> 90

<212> PRT

<213> Homo sapiens

<400> 394

Met Lys Phe Leu Ala Val Leu Val Leu Gly Val Ser Ile Phe  
1 5 10 15

Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr  
20 25 30

Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu  
35 40 45

Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr  
50 55 60

Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val  
65 70 75

Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro  
80 85 90

<210> 395

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 395

gctccctgat cttcatgtca ccacc 25

<210> 396

<211> 26

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 396  
cagggacaca ctctaccatt cgggag 26  
  
<210> 397  
<211> 42  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
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ccatcttct ggtctctgcc cagaatccga caacagctgc tc 42  
  
<210> 398  
<211> 907  
<212> DNA  
<213> Homo sapiens  
  
<400> 398  
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ggcaggacc ccatagggga atgctaccc tcgtccctcc acctgcctg 150  
gtgttcacgg tggcctggc ctccttgcc gagagagtgt cctgggtcag 200  
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aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800  
gctgaggcag gaaaatcgct tgaacccagg aggcggacgt tgcggtgagc 850  
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tcacaca 907

<210> 399

<211> 120

<212> PRT

<213> Homo sapiens

<400> 399

Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala  
1 5 10 15

Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu  
20 25 30

Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly  
35 40 45

Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg  
50 55 60

Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg  
65 70 75

Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn  
80 85 90

Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu  
95 100 105

Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln  
110 115 120

<210> 400

<211> 893

<212> DNA

<213> Homo sapiens

<400> 400

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aacggtgtgt acaggaccac ggagggacgg ctgacaaaagg ccaggaacag 200

cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250

ggggccggga tgcagccag gaacttcggg caagcctgtt ggagactcag 300

atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350

gggggaggtg gcccaggcac agaaggtgct acgggacagc gtgcagccgc 400

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gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750  
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<210> 401  
<211> 198  
<212> PRT  
<213> Homo sapiens

<400> 401  
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20 25 30  
Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu  
35 40 45  
Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu  
50 55 60  
Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu  
65 70 75  
Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu  
80 85 90  
Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu  
95 100 105  
Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala  
110 115 120  
Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val  
125 130 135  
Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu  
140 145 150  
Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala  
155 160 165  
Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln  
170 175 180

Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala  
185 190 195

Leu Pro Ala

<210> 402

<211> 1915

<212> DNA

<213> Homo sapiens

<400> 402

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aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200

tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250

aagttcacaa gaaatgctac cttgcttcag aaggttgaa gcatttccat 300

gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350

gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400

caggtgtcaa tgactttgg ctgggcatca atgacatggt cacggaaggc 450

aagtttgtt acgtcaacgg aatcgctatc tccttcctca actgggaccg 500

tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctccaat 550

cagctcaggg caagtggagt gatgaggcct gtgcagcag caagagatac 600

atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650

agcaagattc atcataactt atagttcat gatctctaag atcaagtaaa 700

aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750

agcaatatga tagcatcagc caatttgct aacacattc tttggattt 800

tgccttcct gggtatagg ggatcagaaa tattgatcca tgtgcacgca 850

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tcacttgtac aaacccagtt tgtttcaaa aaatcacagt agcaatgcaa 950

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gaagtttagc gtatgttga ctaacaaaaa ttccctacat cagagactct 1050

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tgctggcaat aataccttgt cagcccatta cccttattt gaattgctcc 1150

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ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatttg 1300  
atcaattttc attcccacca ttgcattaca acctctaact taaatggta 1350  
accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400  
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cactttgcaa actttaacta cacatgcttgaat aattttttttt 1850  
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aaaaaaaaaaa aaaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu
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Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Leu	Asp	Gln	Thr	Thr
				20				25						30

Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg
					35			40						45

Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu
			50					55						60

Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr
				65				70						75

Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala
					80			85						90

Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile
				95				100						105

Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile  
110 115 120  
Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn  
125 130 135  
Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe  
140 145 150  
Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg  
155 160 165  
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser  
170 175 180  
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser  
185 190 195  
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys  
200 205

<210> 404

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 404

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<210> 405

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 405

ctcttgctgc tgcgacaggc ctc 23

<210> 406

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 406

cgccctccaa gactatggta aaaggaggct gccaggtgtc aatgac 46

<210> 407

<211> 570

<212> DNA

<213> Homo sapiens

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tcggccaagc ctgtggccca gcctgtcgct gcgctggagt cggcggcgg 200  
ggccggggcc gggaccctgg ccaacccctt cggcacccctc aacccgctga 250  
agctcctgct gagcagcctg ggcattccccg tgaaccacct catagagggc 300  
tcccagaagt gtgtggctga gctgggtccc cagggcgtgg gggccgtgaa 350  
ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400  
ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggctga 450  
aaaccccgcc gcggggagga ccgtccatcc cttccccgg gccctctca 500  
ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
aaaaaaaaaa aaaaaaaaaa 570

<210> 408  
<211> 104  
<212> PRT  
<213> Homo sapiens

<400> 408  
Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys  
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Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala  
20 25 30  
Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly  
35 40 45  
Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu  
50 55 60  
Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser  
65 70 75  
Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val  
80 85 90  
Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly  
95 100

<210> 409  
<211> 2089  
<212> DNA  
<213> Homo sapiens

<400> 409

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tgatgtcaaa gagactttct tcaatttatac caagaggtat tttgatacag 650  
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tactggaaga aatctccaag tatccagggt tttacgaaga acagtgattg 1250  
aagttgatga aaggggcact gaggcagtgg caggaatctt gtcagaaatt 1300  
actgcttatt ccatgcctcc tgtcatcaaa gtggaccggc catttcattt 1350  
catgatctat gaagaaacct ctggaatgct tctgttctg ggcagggtgg 1400  
tgaatccgac tctcctataa ttcaggacat gcataagcac ttcgtgctgt 1450

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aaataaaatac agtagtcccc acttatctga gggggataca ttcaaagacc 1600  
cccagcagat gcctgaaacg gtggacagtg ctgaacctta tatatatattt 1650  
ttcctacaca tacataccta tgataaaagtt taatttataa attaggcaca 1700  
gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750  
gcaaggactg caataccata acagtcaaac tgattataga gaaggctact 1800  
aagtgactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850  
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cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950  
tggaaatttt catttaatgt ttttggacca tggttgacca tggtaactg 2000  
agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050  
taaattgata catattttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410

<211> 444

<212> PRT

<213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
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Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
									25					30

Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
										35	40			45

Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
									50	55				60

Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
									65	70				75

Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
									80	85				90

Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
									95	100				105

Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
									110	115				120

Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
									125	130				135

Thr Lys Pro Gly Leu Leu Pro Ser Leu Phe Lys Gly Leu Arg Glu  
 140 145 150  
 Thr Leu Ser Arg Asn Leu Glu Leu Gly Leu Ser Gln Gly Ser Phe  
 155 160 165  
 Ala Phe Ile His Lys Asp Phe Asp Val Lys Glu Thr Phe Phe Asn  
 170 175 180  
 Leu Ser Lys Arg Tyr Phe Asp Thr Glu Cys Val Pro Met Asn Phe  
 185 190 195  
 Arg Asn Ala Ser Gln Ala Lys Arg Leu Met Asn His Tyr Ile Asn  
 200 205 210  
 Lys Glu Thr Arg Gly Lys Ile Pro Lys Leu Phe Asp Glu Ile Asn  
 215 220 225  
 Pro Glu Thr Lys Leu Ile Leu Val Asp Tyr Ile Leu Phe Lys Gly  
 230 235 240  
 Lys Trp Leu Thr Pro Phe Asp Pro Val Phe Thr Glu Val Asp Thr  
 245 250 255  
 Phe His Leu Asp Lys Tyr Lys Thr Ile Lys Val Pro Met Met Tyr  
 260 265 270  
 Gly Ala Gly Lys Phe Ala Ser Thr Phe Asp Lys Asn Phe Arg Cys  
 275 280 285  
 His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val  
 290 295 300  
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr  
 305 310 315  
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr  
 320 325 330  
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys  
 335 340 345  
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile  
 350 355 360  
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg  
 365 370 375  
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val  
 380 385 390  
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile  
 395 400 405  
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe  
 410 415 420  
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu

425

430

435

Gly Arg Val Val Asn Pro Thr Leu Leu  
 440

&lt;210&gt; 411

&lt;211&gt; 636

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 411

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 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150  
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgcggc 200  
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 aggggccccca tccttccagg caccaaggcc tggatggaga ccgaggacac 350  
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 ccaccccccag tagggctcca gggccatca ctgccccgc cctgtcccaa 550  
 ggcccaggt gttggactg ggaccctccc tacccctgccc cagctagaca 600  
 aataaaccaccc agcaggcaaa aaaaaaaaaaaa aaaaaaa 636

&lt;210&gt; 412

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 412

Met	Arg	Arg	Leu	Leu	Leu	Val	Thr	Ser	Leu	Val	Val	Val	Leu	Leu
1														15

Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
20														30

Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
35														45

Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
50														60

Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
65														75

Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys  
80 85 90

Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro  
95 100 105

Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp  
110 115 120

Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln  
125 130 135

Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro  
140 145 150

Gln

<210> 413  
<211> 1176  
<212> DNA  
<213> Homo sapiens

<400> 413  
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caatgaacca actcagcttc ctgctgttcc tcatacgac caccagagga 150  
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200  
gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250  
gtgcatttga tggcctgtat ttctccgca ctgagaatgg tgttatctac 300  
cagacttct gtgacatgac ctctgggggt ggcggctgga ccctggtgcc 350  
cagcgtgcat gagaatgaca tgcgtggaa gtgcacggtg ggcatcgct 400  
ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450  
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ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650  
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tgtgtgctgg aatgagggtc accggatgta acactgagca tcactgcatt 900  
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gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050  
tgtgggaggg aaccaggacc ttcctccca accatgagat cccaaggatg 1100  
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taaatcatat tgactcaaga aaaaaa 1176

<210> 414  
<211> 313  
<212> PRT  
<213> Homo sapiens

<400> 414  
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Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr  
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Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys  
35 40 45  
Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr  
50 55 60  
Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly  
65 70 75  
Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met  
80 85 90  
Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly  
95 100 105  
Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr  
110 115 120  
Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys  
125 130 135  
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala Lys Asp Leu Gly Ile Trp  
140 145 150  
His Val Pro Asn Lys Ser Pro Met Gln His Trp Arg Asn Ser Ser  
155 160 165  
Leu Leu Arg Tyr Arg Thr Asp Thr Gly Phe Leu Gln Thr Leu Gly  
170 175 180  
His Asn Leu Phe Gly Ile Tyr Gln Lys Tyr Pro Val Lys Tyr Gly  
185 190 195

Glu Gly Lys Cys Trp Thr Asp Asn Gly Pro Val Ile Pro Val Val  
 200 205 210  
 Tyr Asp Phe Gly Asp Ala Gln Lys Thr Ala Ser Tyr Tyr Ser Pro  
 215 220 225  
 Tyr Gly Gln Arg Glu Phe Thr Ala Gly Phe Val Gln Phe Arg Val  
 230 235 240  
 Phe Asn Asn Glu Arg Ala Ala Asn Ala Leu Cys Ala Gly Met Arg  
 245 250 255  
 Val Thr Gly Cys Asn Thr Glu His His Cys Ile Gly Gly Gly  
 260 265 270  
 Tyr Phe Pro Glu Ala Ser Pro Gln Gln Cys Gly Asp Phe Ser Gly  
 275 280 285  
 Phe Asp Trp Ser Gly Tyr Gly Thr His Val Gly Tyr Ser Ser Ser  
 290 295 300  
 Arg Glu Ile Thr Glu Ala Ala Val Leu Leu Phe Tyr Arg  
 305 310

<210> 415  
 <211> 1281  
 <212> DNA  
 <213> Homo sapiens

<400> 415  
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 tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcaggtg 150  
 ctagcgctgc tggggccgc ccatgaaagc gcagccatgg cggcatctgc 200  
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 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300  
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350  
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400  
 tctcaacaaa tatgacttct accaccta agtctacacc caaaaacaaca 450  
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtAAC 500  
 ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550  
 ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600  
 gttggtggtttaac gctgggagtt ttatctattc tttacattgg 650  
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700

aacatgatgc catcattaa ggaaatccat ggaccaagga tggaatacag 750  
attgatgctg ccctatcaat taatttttgtt ttattaatag tttaaaacaa 800  
tattctttt ttgaaaatag tataaacagg ccatgcataat aatgtacagt 850  
gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900  
tgaaataaac atctggatct tatagaccgt tcatacaatg gtttagcaa 950  
gttcatagta agacaaacaa gtcctatctt tttttttgg ctgggggtggg 1000  
ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050  
agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100  
tttgggtatc tttttagct cacataaaga acttcagtgc tttcagagc 1150  
tggatatac ttaattacta atgccacaca gaaattatac aatcaaacta 1200  
gatctgaagc ataatttaag aaaaacatca acatttttg tgctttaaac 1250  
ttagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly
1					5				10					15

Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala
								20		25				30

Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His
							35		40					45

Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser
							50		55					60

Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr
							65		70					75

Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys
							80		85					90

Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr	
							95		100					105

Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser
							110		115					120

Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val
							125		130					135

Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser Val Thr Ile

140                    145                    150

Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys Phe Asp  
155                    160                    165

Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val Leu  
170                    175                    180

Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly  
185                    190                    195

Ile Arg Tyr Arg Thr Ile Asp Glu His Asp Ala Ile Ile  
200                    205

<210> 417  
<211> 1728  
<212> DNA  
<213> Homo sapiens

<400> 417  
cagccgggtc ccaaggctgt gcctgaggct gagcctgagc ctgagcccga 50  
gccgggagcc ggtcgcgaaa gctccgggt gtgggaccgc tggggccccca 100  
gcgatggcga ccctgtgggg aggccttctt cggcttggct cttgtctcag 150  
cctgtcgtgc ctggcgctt ccgtgctgt gctggcgcag ctgtcagacg 200  
ccgccaagaa ttccgaggat gtcagatgt aatgtatctg ccctccctat 250  
aaagaaaaatt ctggcataat ttataataag aacatatctc agaaagattg 300  
tgattgcattt catgttgtgg agcccatgcc tgtgcggggg cctgatgttag 350  
aagcatactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400  
acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450  
tctgtacatg gtatatctta ctctgggtga gcccatactg aagaggcgcc 500  
tctttggaca tgcacagttt atacagagtg atgatgatat tggggatcac 550  
cagccttttg caaatgcaca cgatgtgcta gcccgtccc gcagtcgagc 600  
caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650  
tccaagagca gcgaaagtct gtctttgacc ggcattgtgt cctcagctaa 700  
ttggaaattt aattcaaggt gactagaaag aaacaggcag acaactggaa 750  
agaactgact gggtttgtt gggtttcatt ttaatacctt gttgatttca 800  
ccaactgttg ctggaaagatt caaaaactgga agcaaaaaact tgcttattt 850  
ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900  
aaagtcagcc aataagtctt ttccttattt tgacttttac taataaaaat 950

aaatctgcct gtaaatttac ttgaagtcc ttacctggaa caagcactct 1000  
cttttcacc acatagttt aacttgactt tcaagataat tttcagggtt 1050  
tttgttggtt tggttttg tttgtttgtt ttgggtggag aggggaggg 1100  
tgcctggaa gtggtaaca actttttca agtcactta ctaaacaaac 1150  
tttgtaaat agaccttacc ttctatccc gagtttcatt tatatttgc 1200  
agttagcca gcctcatcaa agagctgact tactcatttgc 1250  
tgactgtatt atctgggtat ctgctgtgtc tgcaattcat ggttaaacggg 1300  
atctaaaatg cctggggct tttcacaaaa agcagattt cttcatgtac 1350  
tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt 1400  
tactctaaag actaaacata gtcttgggt gtgtggctt actcatcttc 1450  
tagtacctt aaggacaaat cctaaggact tggacacttg caataaagaa 1500  
attttattt aaacccaagc ctccctggat tgataatata tacacatttgc 1550  
tcagcatttc cggcgtggc gagaggcagc tggttggctt ccaatatgtc 1600  
cagcttgaa ctagggctgg gggttgggtt gcctttctg aaaggtctaa 1650  
ccattattgg ataactggct ttttcttcc tatgtcctct ttggaatgt 1700  
acaataaaaa taattttga aacatcaa 1728

<210> 418  
<211> 198  
<212> PRT  
<213> Homo sapiens

<400> 418  
Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu  
1 5 10 15  
  
Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu  
20 25 30  
  
Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile  
35 40 45  
  
Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn  
50 55 60  
  
Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met  
65 70 75  
  
Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu  
80 85 90  
  
Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile  
95 100 105

Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val  
110 115 120  
Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly  
125 130 135  
His Ala Gln Leu Ile Gln Ser Asp Asp Ile Gly Asp His Gln  
140 145 150  
Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg  
155 160 165  
Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys  
170 175 180  
Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val  
185 190 195  
Val Leu Ser

<210> 419  
<211> 681  
<212> DNA  
<213> Homo sapiens

<400> 419  
gcacacctgca ccaccgttag cagtcatggc gtactccaca gtgcagagag 50  
tcgctctggc ttctgggctt gtcctggctc tgtcgtgt gctgccaaag 100  
gccttcctgt cccgcggaa gcggcaggag ccggccggca cacctgaagg 150  
aaaattggc cgatttccac ctatgatgca tcatcaccag gcaccctcag 200  
atggccagac tcctgggct cgttccaga ggtctcacct tgccgaggca 250  
tttgcaaagg ccaaaggatc aggtggaggt gctggaggag gaggtagtgg 300  
aagaggtctg atggggcaga ttattccaat ctacggttt gggattttt 350  
tatataatact gtacattcta tttaaggtaa gtagaatcat cctaattata 400  
ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450  
aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500  
ctgcctcctc ttcatgaggt acttaggata gccattattt cagtttcaca 550  
taagaatgt tactcaatgt ttaagtgtt tgccccaaaa ttcacaacta 600  
acaaggcaga actaggactt gaacatggat ctttgggtc ttaatccagt 650  
gagtgataca attcaatgca ctccccgtgcc a 681

<210> 420  
<211> 128  
<212> PRT

<213> Homo sapiens

<400> 420

Met	Ala	Tyr	Ser	Thr	Val	Gln	Arg	Val	Ala	Leu	Ala	Ser	Gly	Leu
1					5				10					15
Val	Leu	Ala	Leu	Ser	Leu	Leu	Leu	Pro	Lys	Ala	Phe	Leu	Ser	Arg
					20				25					30
Gly	Lys	Arg	Gln	Glu	Pro	Pro	Pro	Thr	Pro	Glu	Gly	Lys	Leu	Gly
					35				40					45
Arg	Phe	Pro	Pro	Met	Met	His	His	His	Gln	Ala	Pro	Ser	Asp	Gly
					50				55					60
Gln	Thr	Pro	Gly	Ala	Arg	Phe	Gln	Arg	Ser	His	Leu	Ala	Glu	Ala
					65				70					75
Phe	Ala	Lys	Ala	Lys	Gly	Ser	Gly	Gly	Ala	Gly	Gly	Gly	Gly	
					80				85					90
Ser	Gly	Arg	Gly	Leu	Met	Gly	Gln	Ile	Ile	Pro	Ile	Tyr	Gly	Phe
					95				100					105
Gly	Ile	Phe	Leu	Tyr	Ile	Leu	Tyr	Ile	Leu	Phe	Lys	Val	Ser	Arg
					110				115					120
Ile	Ile	Leu	Ile	Ile	Leu	His	Gln							
					125									

<210> 421

<211> 1630

<212> DNA

<213> Homo sapiens

<400> 421

cggctcgagt	gcagctgtgg	ggagatttca	gtgcattgcc	tccctgggt	50
gctcttcatc	ttggatttga	aagttgagag	cagcatgttt	tgcccactga	100
aactcatcct	gctgccagtg	ttactggatt	attccttggg	cctgaatgac	150
ttgaatgttt	ccccgcctga	gctaacagtc	catgtgggtg	attcagctct	200
gatggatgt	gtttccaga	gcacagaaga	caaatgtata	ttcaagatag	250
actggactct	gtcaccagga	gagcacgcca	aggacgaata	tgtgctatac	300
tattactcca	atctcagtgt	gcctattggg	cgcttccaga	accgcgtaca	350
cttgatgggg	gacatcttat	gcaatgatgg	ctctctcctg	ctccaagatg	400
tgcaagaggc	tgaccaggga	acctatatct	gtaaaatccg	cctcaaaggg	450
gagagccagg	tgttcaagaa	ggcggtggta	ctgcatgtgc	ttccagagga	500
gccccaaagag	ctcatggtcc	atgtgggtgg	attgattcag	atggatgtg	550

tttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600  
tcaggacggc gcgcaaagga ggagattgta tttcgtaact accacaaact 650  
caggatgtct gtggagtact cccagagctg gggccacttc cagaatcg 700  
tgaacctgg 750  
ggagtgaggg agtcagatgg aggaaactac acctgcagta tccacctagg 800  
gaacctgg 850  
ctcgaacact ggtgaccccg gcagccctga ggcctctgg 900  
aatcagttgg tgatcattgt gggattgtc tgtgccacaa tcctgctgct 950  
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000  
tgaattctac agtcttgg 1050  
aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattt 1100  
ctccccata attgtacggg aggtgatcg 1150  
aatcagaggc cacctacatg accatgcacc cagtttgcc ttctctgagg 1200  
tcagatcg 1250  
aacacagcaa gcctttgag aagaatggag agtccctca tctcagcagc 1300  
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatttc 1350  
agactcccgc tctccagct gtcctcctgt 1400  
ctgaagatgg agaatttgg 1450  
gaacaggcct gctgaggg 1500  
acactggccc tggaaaccag gctgagctga gtggcctcaa acccccccgtt 1550  
ggatcagacc ctccctgtgg 1600  
aatcagaga taaaaaaccaa cccaaatcaa 1630

<210> 422  
<211> 394  
<212> PRT  
<213> Homo sapiens

<400> 422  
Met Phe Cys Pro Leu Lys Leu Ile Leu Leu Pro Val Leu Leu Asp  
1 5 10 15  
Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu  
20 25 30  
Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln  
35 40 45

Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser  
                   50                     55                     60  
 Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser  
                   65                     70                     75  
 Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu  
                   80                     85                     90  
 Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp  
                   95                     100                    105  
 Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu  
                   110                    115                    120  
 Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val  
                   125                    130                    135  
 Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu  
                   140                    145                    150  
 Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val  
                   155                    160                    165  
 Thr Lys Val Glu Trp Ile Phe Ser Gly Arg Arg Ala Lys Glu Glu  
                   170                    175                    180  
 Ile Val Phe Arg Tyr Tyr His Lys Leu Arg Met Ser Val Glu Tyr  
                   185                    190                    195  
 Ser Gln Ser Trp Gly His Phe Gln Asn Arg Val Asn Leu Val Gly  
                   200                    205                    210  
 Asp Ile Phe Arg Asn Asp Gly Ser Ile Met Leu Gln Gly Val Arg  
                   215                    220                    225  
 Glu Ser Asp Gly Gly Asn Tyr Thr Cys Ser Ile His Leu Gly Asn  
                   230                    235                    240  
 Leu Val Phe Lys Lys Thr Ile Val Leu His Val Ser Pro Glu Glu  
                   245                    250                    255  
 Pro Arg Thr Leu Val Thr Pro Ala Ala Leu Arg Pro Leu Val Leu  
                   260                    265                    270  
 Gly Gly Asn Gln Leu Val Ile Ile Val Gly Ile Val Cys Ala Thr  
                   275                    280                    285  
 Ile Leu Leu Leu Pro Val Leu Ile Leu Ile Val Lys Lys Thr Cys  
                   290                    295                    300  
 Gly Asn Lys Ser Ser Val Asn Ser Thr Val Leu Val Lys Asn Thr  
                   305                    310                    315  
 Lys Lys Thr Asn Pro Glu Ile Lys Glu Lys Pro Cys His Phe Glu  
                   320                    325                    330  
 Arg Cys Glu Gly Glu Lys His Ile Tyr Ser Pro Ile Ile Val Arg

335	340	345
Glu Val Ile Glu Glu Glu Pro Ser Glu Lys Ser Glu Ala Thr		
350	355	360
Tyr Met Thr Met His Pro Val Trp Pro Ser Leu Arg Ser Asp Arg		
365	370	375
Asn Asn Ser Leu Glu Lys Lys Ser Gly Gly Gly Met Pro Lys Thr		
380	385	390
Gln Gln Ala Phe		

<210> 423  
<211> 963  
<212> DNA  
<213> Homo sapiens

<400> 423  
ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50  
ccatctcaca tggttctacc ctactaaaga caggaagatc ataaaactgac 100  
agatactgaa attgttaagag ttggaaacta catttgcaa agtcattgaa 150  
ctctgagctc agttgcagta ctccggaaagc catgcaggat gaagatggat 200  
acatcacctt aaatattaaa actcgaaac cagctctcgat ctccgttggc 250  
cctgcatcct cctcctggtg gcgtgtgatg gctttgattc tgctgatcct 300  
gtgcgtgggg atgggtgtcg ggctggtgcc tctggggatt tggtctgtca 350  
tgcagcgcaa ttacctacaa gatgagaatg aaaatcgac aggaactctg 400  
caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450  
aaagggcact ttcaaaggcata ataaatgcag cccctgtgac acaaactgga 500  
gatattatgg agatagctgc tatgggttct tcagggcacaa cttAACATGG 550  
gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600  
tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650  
gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700  
gatggctcgg ttatctcaga aaatatgttt gagttttgg aagatggaaa 750  
aggaaatatg aattgtgctt atttcataa tggaaaaatg caccctaccc 800  
tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850  
aagggtggacc aactaccta atgcaaagag gtggacagga taacacagat 900  
aagggtttta ttgtacaata aaagatatgt atgaatgcatt cagtagctga 950

aaaaaaaaaaa aaa 963

<210> 424

<211> 229

<212> PRT

<213> Homo sapiens

<400> 424

Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg  
1 5 10 15

Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp  
20 25 30

Arg Val Met Ala Leu Ile Leu Ile Leu Cys Val Gly Met Val  
35 40 45

Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn  
50 55 60

Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln  
65 70 75

Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu  
80 85 90

Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn  
95 100 105

Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn  
110 115 120

Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala  
125 130 135

Thr Leu Leu Lys Ile Asp Asn Arg Asn Ile Val Glu Tyr Ile Lys  
140 145 150

Ala Arg Thr His Leu Ile Arg Trp Val Gly Leu Ser Arg Gln Lys  
155 160 165

Ser Asn Glu Val Trp Lys Trp Glu Asp Gly Ser Val Ile Ser Glu  
170 175 180

Asn Met Phe Glu Phe Leu Glu Asp Gly Lys Gly Asn Met Asn Cys  
185 190 195

Ala Tyr Phe His Asn Gly Lys Met His Pro Thr Phe Cys Glu Asn  
200 205 210

Lys His Tyr Leu Met Cys Glu Arg Lys Ala Gly Met Thr Lys Val  
215 220 225

Asp Gln Leu Pro

<210> 425

<211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 425  
tgcagccct gtgacacaaa ctgg 24

<210> 426  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 426  
ctgagataac cgagccatcc tccccac 26

<210> 427  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 427  
gcttcctgac actaaggctg tctgcttagtc agaattgcct caaaaagag 49

<210> 428  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 428  
ccaccaatgg cagccccacc t 21

<210> 429  
<211> 17  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 429  
gactgccctc cctgcac 17

<210> 430  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 430  
caaaaagcct ggaagtcttc aaag 24

<210> 431  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 431  
cagctggact gcaggtgcta 20

<210> 432  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 432  
cagttagcac agcaagtgtc ct 22

<210> 433  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 433  
ggccacaccttcc ttgagtcattc agttccct 28

<210> 434  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 434  
caactactgg ctaaaagctgg tgaa 24

<210> 435  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 435  
cctttctgta taggtgatac ccaatga 27

<210> 436  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 436  
tggccatccc taccagaggc aaaa 24

<210> 437  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 437  
ctgaagacga cgcggttac ta 22

<210> 438  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 438  
ggcagaaatg ggaggcaga 19

<210> 439  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 439  
tgctctgttg gctacggctt tagtccctag 30

<210> 440  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 440  
agcagcagcc atgtagaatg aa 22

<210> 441  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 441  
aatacgaaca gtgcacgctg at 22

<210> 442  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 442  
tccagagagc caagcacggc aga 23

<210> 443  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 443  
tcttagccagc ttggctccaa ta 22

<210> 444  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 444  
cctggctcta gcaccaactc ata 23

<210> 445  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 445  
tcagtggccc taaggagatg ggcct 25

<210> 446  
<211> 24  
<212> DNA

<213> Artificial Sequence  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 446  
caggatacag tggaaatctt gaga 24  
  
<210> 447  
<211> 22  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 447  
cctgaagggc ttggagctta gt 22  
  
<210> 448  
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<400> 448  
tctttggcca tttcccatgg ctca 24  
  
<210> 449  
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<223> Synthetic oligonucleotide probe  
  
<400> 449  
cccatggcga ggaggaat 18  
  
<210> 450  
<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 450  
tgcgtacgtg tgccttcag 19  
  
<210> 451  
<211> 24  
<212> DNA  
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<220>

<223> Synthetic oligonucleotide probe

<400> 451  
cagcacccca ggcagtctgt gtgt 24

<210> 452  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 452  
aacgtgctac acgaccagg tact 24

<210> 453  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 453  
cacagcatat tcagatgact aaatcca 27

<210> 454  
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<220>

<223> Synthetic oligonucleotide probe

<400> 454  
ttgttttagtt ctccaccgtg tctccacaga a 31

<210> 455  
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<212> DNA  
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<220>

<223> Synthetic oligonucleotide probe

<400> 455  
tgtcagaatg caacctggct t 21

<210> 456  
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<220>

<223> Synthetic oligonucleotide probe

<400> 456

tgatgtgcct ggctcagaac 20  
<210> 457  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 457  
tgcacctaga tgtccccagg accc 24  
  
<210> 458  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 458  
aagatgcgcc aggttctta 20  
  
<210> 459  
<211> 24  
<212> DNA  
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<400> 459  
tcctgtacg gtctgctac ttat 24  
  
<210> 460  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 460  
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<211> 29  
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<400> 461  
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<210> 462

<211> 27  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 462  
caaattaaag tacccatcag gagagaa 27

<210> 463  
<211> 37  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 463  
aagttgctaa atatatacat tatctgcgcc aagtcca 37

<210> 464  
<211> 20  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 464  
gtgctgcccc caattcatga 20

<210> 465  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 465  
gtccttggta tgggtctgaa ttatat 26

<210> 466  
<211> 31  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 466  
actctctgca ccccacagtc accactatct c 31

<210> 467  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 467  
ctgaggaacc agccatgtct ct 22

<210> 468  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 468  
gaccagatgc aggtacagga tga 23

<210> 469  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 469  
ctgccccttc agtgatgccca acctt 25

<210> 470  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 470  
gggtggaggc tcactgagta ga 22

<210> 471  
<211> 28  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 471  
caatacaggt aatgaaaactc tgcttctt 28

<210> 472  
<211> 36  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 472  
tcctcttaag cataggccat tttctcagtt tagaca 36

<210> 473  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 473  
ggtgtcttg cttggtctca c 21

<210> 474  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 474  
ccgtcggttca gcaacatgac 20

<210> 475  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 475  
accgcctacc gctgtgccca 20

<210> 476  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 476  
cagtaaaacc acaggctgga ttt 23

<210> 477  
<211> 24  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 477  
cctgagagca agaagggttga gaat 24

<210> 478  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 478  
tagacaggga ccatggcccg ca 22

<210> 479  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 479  
tgggctgtag aagagttgtt g 21

<210> 480  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 480  
tccacacttg gccagtttat 20

<210> 481  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 481  
cccaacttct ccctttgga ccct 24

<210> 482  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 482  
gtcccttcac tgtttagagc atga 24

<210> 483  
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<212> DNA

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<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 483  
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<210> 484

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 484  
gtggtcaggg cagatccttt 20

<210> 485

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 485  
acagatccag gagagactcc aca 23

<210> 486

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 486  
agcggcgctc ccagcctgaa t 21

<210> 487

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 487  
catgattggt cctcagttcc atc 23

<210> 488

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe  
<400> 488  
atagagggct cccagaagtg 20  
<210> 489  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 489  
cagggccttc agggcattca c 21  
  
<210> 490  
<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 490  
gctcagccaa acactgtca 19  
  
<210> 491  
<211> 17  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 491  
ggggccctga cagtgtt 17  
  
<210> 492  
<211> 26  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 492  
ctgagccgag actggagcat ctacac 26  
  
<210> 493  
<211> 17  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 493

gtgggcagcg tcttgtc 17

<210> 494  
<211> 1231  
<212> DNA  
<213> Homo Sapien

<400> 494  
cccacgcgtc cgccgcagtcg cgcagttctg cctccgcctg ccagtctcgc 50  
ccgcgatccc ggccccgggc tgtggcgctcg actccgaccc aggcagccag 100  
cagcccgccgc gggagccgga ccgcccgcgg aggagctcgg acggcatgct 150  
gagccccctc ctttgctgaa gcccgagtgc ggagaagccc gggcaaacgc 200  
aggctaagga gaccaaagcg gcgaagtgcg gagacagcgg acaagcagcg 250  
gaggagaagg aggaggaggc gaaccagag agggcagca aaagaagcgg 300  
tggtgtggg cgtcgtggcc atggcggcgg ctatcgccag ctcgctcattc 350  
cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaagtg 400  
tgtcagcagc cccagcaaag gcaagaccag ctgcgacaaa aacaagttaa 450  
atgtcttttc cgggtcaaa ctcttcggct ccaagaagag ggcagaaga 500  
agaccagagc ctcagcttaa gggtatagtt accaagctat acagccgaca 550  
aggctaccac ttgcagctgc aggccgatgg aaccattgtt ggcaccaaag 600  
atgaggacag cacttacact ctgtttaacc tcattccgtt gggctgcga 650  
gtggtggtca tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700  
tgagggatac ttgtacacct cggaactttt cacacctgag tgcaaattca 750  
aagaatcagt gtttggaaat tattatgtga catattcatc aatgatatac 800  
cgtcagcagc agtcaggccg aggggtggat ctgggtctga acaaagaagg 850  
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900  
ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcaactgcac 950  
gatctcacgg agttctcccg atctggaagc gggacccaa ccaagagcag 1000  
aagtgtctct ggcgtgctga acggaggcaatccatgagc cacaatgaat 1050  
caacgttagcc agtgaggcaaa aaagaaggc tctgtacacag aaccttacct 1100  
ccaggtgctg ttgaattctt ctagcagtcc ttcacccaaa agttcaaatt 1150  
tgtcagtgac atttaccaaa caaacaggca gagttcacta ttcttatctgc 1200  
cattagaccc tcttatcatc cataactaaag c 1231

<210> 495  
<211> 245  
<212> PRT  
<213> Homo Sapien

<400> 495  
Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln  
1 5 10 15  
Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser  
20 25 30  
Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val  
35 40 45  
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg  
50 55 60  
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser  
65 70 75  
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp  
80 85 90  
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile  
95 100 105  
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys  
110 115 120  
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu  
125 130 135  
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn  
140 145 150  
Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser  
155 160 165  
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met  
170 175 180  
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu  
185 190 195  
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His  
200 205 210  
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys  
215 220 225  
Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser  
230 235 240  
His Asn Glu Ser Thr  
245

<210> 496

<211> 1471  
<212> DNA  
<213> Homo Sapien

<400> 496  
ccaggatgga gctggggcct gtatagccat attattgttc tatgctacta 50  
gacatggggg ggacttggtg aaaaaggat tatccagcca gagggtctgg 100  
gagccctgtc ttactgaacc tggcaacct ggatattctg agacatattt 150  
tggggggatt tcagtaaaa aagtggggga tcccctccat ttagagtgt 200  
gcaaaggaaa aaacaccaag gttgggttcc ttcctgacat tggcagtgcc 250  
ccagtagggg tggatgagc gaatattccc aaagctaaag tcccacaccc 300  
tgttagattac aagagtggat ttggcaggag tgtccccaa aatacagtgg 350  
aaaggtgcct gaagatattt aaaccacgtc ttggaaattt agtgggtctt 400  
ggctttggga taggtgaagt gaggacagac actggagagg agggaaagg 450  
gacgtttca ataggaggca aaactcgagg gtggatcca ctgaggagta 500  
cataggctgc tggatctggt ggagccagca ctggcccac gggtgtaac 550  
tggctgctgt ggaggggggt acgtgagggg ggggtctgg gcttacctc 600  
aggtcctgtg ggtggggcag cgagtcgggg cctgagcgac aagagcatgc 650  
cctagtgagc gggctcctct gggggagccc agcgcgtcc gggcgctgc 700  
cggtttgggg gtgtctcctc ccggggcgct atggcggcgc tggccagtag 750  
cctgatccgg cagaagcggg aggtccgcga gcccggggc agccggccgg 800  
tgtcggcgcga gcggcgcgtg tgtccccgcg gcaccaagtc ccttgcag 850  
aagcagctcc tcatcctgct gtccaaagggt cgactgtgcg gggggcggcc 900  
cgcgccggccg gaccgcggcc cggagcctca gctcaaaggc atcgtcacca 950  
aactgttctg ccgcagggt ttctacctcc aggcgaatcc cgacggaagc 1000  
atccagggca ccccagagga taccagctcc ttcacccact tcaacctgat 1050  
ccctgtggc ctccgtgtgg tcaccatcca gagcgccaag ctgggtcact 1100  
acatggccat gaatgctgag ggactgctct acagttcgcc gcatttcaca 1150  
gctgagtgtc gcttaagga gtgtgtctt gagaattact acgtcctgt 1200  
cgccctctgtc ctctaccgcg acgcgtcggtc tggccggcc tggcaccc 1250  
gcctggacaa ggagggccag gtcatgaagg gaaaccgagt taagaagacc 1300  
aaggcagctg cccacttct gcccaagctc ctggaggtgg ccatgtacca 1350

ggagccttct ctccacagtg tccccgaggc ctccccttcc agtccccctg 1400  
ccccctgaaa tgttagtcct ggactggagg ttccctgcac tcccagttag 1450  
ccagccacca ccacaacctg t 1471

<210> 497  
<211> 225  
<212> PRT  
<213> Homo Sapien

<400> 497  
Met Ala Ala Leu Ala Ser Ser Leu Ile Arg Gln Lys Arg Glu Val  
1 5 10 15  
Arg Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val  
20 25 30  
Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile  
35 40 45  
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro  
50 55 60  
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu  
65 70 75  
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser  
80 85 90  
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn  
95 100 105  
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys  
110 115 120  
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser  
125 130 135  
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe  
140 145 150  
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg  
155 160 165  
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln  
170 175 180  
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His  
185 190 195  
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser  
200 205 210  
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro  
215 220 225

<210> 498

<211> 744  
<212> DNA  
<213> Homo Sapien

<400> 498  
atggccgcgg ccatcgctag cggcttgcac cgccagaagc ggcaggcg 50  
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccc 100  
gcaagaaccc cggtctgc aacggcaacc tggtgatat ctctccaaa 150  
gtgcgcatct tcggcctcaa gaagcgcagg ttgcggcgcc aagatcccc 200  
gctcaagggt atagtgacca ggttatattt caggcaaggc tactacttgc 250  
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300  
tctacactt tcaacctcat accagtggga ctacgtgttgg ttgcacatcca 350  
gggagtgaaa acagggttgt atatagccat gaatggagaa ggtaacctct 400  
acccatcaga acttttacc cctgaatgca agttaaaga atctgttttt 450  
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500  
tggtagagcc tggttttgg gattaaataa ggaaggc 550  
ggaacagagt aaagaaaacc aaaccagcag ctcattttct acccaagcca 600  
ttggaagttt ccattgtaccg agaaccatct ttgcattgttggggaaac 650  
ggtcccgaag cctgggtga cgccaaatgaa aagcacaagt gcgtctgcaa 700  
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499  
<211> 247  
<212> PRT  
<213> Homo Sapien

<400> 499  
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln  
1 5 10 15  
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg  
20 25 30  
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val  
35 40 45  
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg  
50 55 60  
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu  
65 70 75  
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala  
80 85 90

Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn  
95 100 105

Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys  
110 115 120

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro  
125 130 135

Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe  
140 145 150

Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln  
155 160 165

Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln  
170 175 180

Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His  
185 190 195

Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser  
200 205 210

Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro  
215 220 225

Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro  
230 235 240

Val Asn Lys Ser Lys Thr Thr  
245

<210> 500

<211> 2906

<212> DNA

<213> Homo Sapien

<400> 500

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ggctgttggg tgccttcaa aaatgaagga tgcaggacgc agctttctcc 100

tggAACCGAA CGCAATGGAT AAACTGATTG TGCAAGAGAG AAGGAAGAAC 150

GAAGCTTTT CTGTGAGCC CTGGATCTTA ACACAAATGT GTATATGTGC 200

ACACAGGGAG CATTCAAGAA TGAATAAAC CAGAGTTAGA CCCGCGGGGG 250

TTGGTGTGTT CTGACATAAA TAAATAATCT TAAAGCAGCT GTTCCCCTCC 300

CCACCCCCAA AAAAAGGAT GATTGGAAAT GAAGAACCGA GGATTCAACAA 350

AGAAAAAAAGT ATGTTCATTT TTCTCTATAA AGGAGAAAGT GAGCCAAGGA 400

GATATTTTG GAATGAAAAG TTTGGGGCTT TTTTAGTAAA GTAAAGAAACT 450

GGTGTGGTGG TGTTTCCTT TCTTTTGAA TTTCCCACAA GAGGAGAGGA 500

aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550  
gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600  
tttgtgccta tggactaa aattgacgga taattgcagt tggattttc 650  
ttcatcaacc tcctttttt taaatttta ttcctttgg tatcaagatc 700  
atgcgtttc tcttgttctt aaccacctgg atttccatct ggatgttgc 750  
gtgatcagtc tgaaatacaa ctgtttgaat tccagaagga ccaacaccag 800  
ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850  
ataggtccta gtttaacag gcccatttt gacccctgc ttgtggtgct 900  
gctggctctt caacttcttg tggtggctgg tctggcgg gctcagacct 950  
gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000  
cgaaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050  
gctgaacctc catgagaacc aaatccagat catcaaagtg aacagttca 1100  
agcacttgag gcacttgaa atcctacagt tgagtaggaa ccatatcaga 1150  
accattgaaa ttggggctt caatggtctg gcgaacctca acactctgga 1200  
actcttgac aatgtctta ctaccatccc gaatggagct tttgtatact 1250  
tgtctaaact gaaggagctc tggttgcaa acaacccat tgaaagcatc 1300  
ccttcttatg ctttaacag aattcctct ttgcggcac tagacttagg 1350  
ggaattgaaa agactttcat acatctcaga aggtgcctt gaaggtctgt 1400  
ccaacttgag gtatttgaac cttgccatgt gcaacctcg ggaaatccct 1450  
aacctcacac cgctcataaa actagatgag ctggatctt ctggaatca 1500  
tttatctgcc atcaggcctg gctttcca gggtttgatg cacttcaaa 1550  
aactgtggat gatacagtcc cagattcaag tgattgaacg gaatgcctt 1600  
gacaaccttc agtcaactgt ggagatcaac ctggcacaca ataatcta 1650  
attactgcct catgacctct tcactccctt gcatcatcta gagcggatac 1700  
atttacatca caaccctgg aactgtact gtgacatact gtggctcagc 1750  
tggggataa aagacatggc cccctcgAAC acagcttggt gtggccgg 1800  
taacactcct cccaatctaa aggggaggtt cattggagag ctcgaccaga 1850  
attacttcac atgctatgct ccggtgattt tggagcccc tgcagaccc 1900  
aatgtcactg aaggcatggc agctgagctg aaatgtcg 1950

cctgacatct gtatcttgg a ttactccaaa tggaacagtc atgacacatg 2000  
gggcgtacaa agtgccgata gctgtgctca gtgatggta c gttaaatttc 2050  
acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtgagtaa 2100  
ttccgttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150  
ccactactcc tttctcttac tttcaaccg tcacagttaga gactatggaa 2200  
ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtcccactcc 2250  
agtggtcgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300  
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ataaattcaa tacacagttc agtgcattgaa ccgttattga tccgaatgaa 2700  
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caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800  
tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaacaa 2850  
aaaagaaaag aaatttattt attaaaaattt ctattgtat ctaaagcaga 2900  
caaaaa 2906

<210> 501  
<211> 640  
<212> PRT  
<213> Homo Sapien

<400> 501  
Met Leu Asn Lys Met Thr Leu His Pro Gln Gln Ile Met Ile Gly  
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Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu  
20 25 30  
Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln  
35 40 45  
Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val  
50 55 60

Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser  
 65 70 75  
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile  
 80 85 90  
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu  
 95 100 105  
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe  
 110 115 120  
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg  
 125 130 135  
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu  
 140 145 150  
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser  
 155 160 165  
 Tyr Ala Phe Asn Arg Ile Pro Ser Leu Arg Arg Leu Asp Leu Gly  
 170 175 180  
 Glu Leu Lys Arg Leu Ser Tyr Ile Ser Glu Gly Ala Phe Glu Gly  
 185 190 195  
 Leu Ser Asn Leu Arg Tyr Leu Asn Leu Ala Met Cys Asn Leu Arg  
 200 205 210  
 Glu Ile Pro Asn Leu Thr Pro Leu Ile Lys Leu Asp Glu Leu Asp  
 215 220 225  
 Leu Ser Gly Asn His Leu Ser Ala Ile Arg Pro Gly Ser Phe Gln  
 230 235 240  
 Gly Leu Met His Leu Gln Lys Leu Trp Met Ile Gln Ser Gln Ile  
 245 250 255  
 Gln Val Ile Glu Arg Asn Ala Phe Asp Asn Leu Gln Ser Leu Val  
 260 265 270  
 Glu Ile Asn Leu Ala His Asn Asn Leu Thr Leu Leu Pro His Asp  
 275 280 285  
 Leu Phe Thr Pro Leu His His Leu Glu Arg Ile His Leu His His  
 290 295 300  
 Asn Pro Trp Asn Cys Asn Cys Asp Ile Leu Trp Leu Ser Trp Trp  
 305 310 315  
 Ile Lys Asp Met Ala Pro Ser Asn Thr Ala Cys Cys Ala Arg Cys  
 320 325 330  
 Asn Thr Pro Pro Asn Leu Lys Gly Arg Tyr Ile Gly Glu Leu Asp  
 335 340 345  
 Gln Asn Tyr Phe Thr Cys Tyr Ala Pro Val Ile Val Glu Pro Pro

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Arg Ala Ser Thr Ser Leu Thr Ser Val Ser Trp Ile Thr Pro Asn			
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Gly Thr Val Met Thr His Gly Ala Tyr Lys Val Arg Ile Ala Val			
395	400	405	
Leu Ser Asp Gly Thr Leu Asn Phe Thr Asn Val Thr Val Gln Asp			
410	415	420	
Thr Gly Met Tyr Thr Cys Met Val Ser Asn Ser Val Gly Asn Thr			
425	430	435	
Thr Ala Ser Ala Thr Leu Asn Val Thr Ala Ala Thr Thr Thr Pro			
440	445	450	
Phe Ser Tyr Phe Ser Thr Val Thr Val Glu Thr Met Glu Pro Ser			
455	460	465	
Gln Asp Glu Ala Arg Thr Thr Asp Asn Asn Val Gly Pro Thr Pro			
470	475	480	
Val Val Asp Trp Glu Thr Thr Asn Val Thr Thr Ser Leu Thr Pro			
485	490	495	
Gln Ser Thr Arg Ser Thr Glu Lys Thr Phe Thr Ile Pro Val Thr			
500	505	510	
Asp Ile Asn Ser Gly Ile Pro Gly Ile Asp Glu Val Met Lys Thr			
515	520	525	
Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Ile Thr Leu Met Ala			
530	535	540	
Ala Val Met Leu Val Ile Phe Tyr Lys Met Arg Lys Gln His His			
545	550	555	
Arg Gln Asn His His Ala Pro Thr Arg Thr Val Glu Ile Ile Asn			
560	565	570	
Val Asp Asp Glu Ile Thr Gly Asp Thr Pro Met Glu Ser His Leu			
575	580	585	
Pro Met Pro Ala Ile Glu His Glu His Leu Asn His Tyr Asn Ser			
590	595	600	
Tyr Lys Ser Pro Phe Asn His Thr Thr Val Asn Thr Ile Asn			
605	610	615	
Ser Ile His Ser Ser Val His Glu Pro Leu Leu Ile Arg Met Asn			
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Ser Lys Asp Asn Val Gln Glu Thr Gln Ile			
635	640		

<210> 502  
<211> 2458  
<212> DNA  
<213> Homo Sapien

<400> 502  
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ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150  
agcaactgag cgggaaagcg cccgcgtccg gggatcggga tgtccctcct 200  
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ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300  
caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350  
cgataatgaa gggAACAAA aagtggtgat cacttactcc agtcgtcatg 400  
tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450  
aatttcctgg caggagatgc ctccttgcag attgaacctc tgaagcccag 500  
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ccagaggtga gagttctga accaaagaaa gtccaccatg ctaatctgac 1250  
caaagcagaa accacaccca gcatgatccc cagccagagc agagccttcc 1300

aaacggtctg aattacaatg gacttgactc ccacgcttc ctaggagtca 1350  
gggtcttgg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400  
ccagatgaga ggtcatctaa gtagcagtga gcattgcacg gaacagattc 1450  
agatgagcat tttccttata caataccaaa caagcaaaag gatgtaagct 1500  
gattcatctg taaaaaggca tcttattgtg ccttagacc agagtaaggg 1550  
aaagcaggag tccaaatcta tttgttacc accggactgtg gtgagaaggt 1600  
tggggaaagg tgaggtgaat atacctaaaa ctttaatgt gggatattt 1650  
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agctaaccac ttctaaagaaa ctccaaaaaa ggaaacatgt gtcttctatt 1850  
ctgacttaac ttcatttgc ataaggttt gatattaatt tcaagggag 1900  
ttgaaatagt gggagatgga gaagagtgaa tgagttctc ccactctata 1950  
ctaatttcac tatttgtatt gagccaaaaa taactatgaa aggagacaaa 2000  
aatttgtgac aaaggattgt gaagagctt ccatttcatt gatgttatga 2050  
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cctcaaatca gatgcctcta aggacttcc tgcttagatat ttctggaagg 2150  
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agaaaaaggg atcttaggaat gctgaaagat tacccaaacat accattatag 2250  
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cgggcatggt gccaggcacc tgttagaaaaa tccagcaggt ggaggttgca 2400  
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<210> 503  
<211> 373  
<212> PRT  
<213> Homo Sapien

<400> 503  
Met Ser Leu Leu Leu Leu Leu Leu Val Ser Tyr Tyr Val Gly  
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Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys

DRAFT

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Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp		
35	40	45
Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln		
50	55	60
Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu		
65	70	75
Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu		
80	85	90
Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp		
95	100	105
Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val		
110	115	120
Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro		
125	130	135
Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr		
140	145	150
Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr		
155	160	165
Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro		
170	175	180
Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu		
185	190	195
Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala		
200	205	210
Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val		
215	220	225
Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly		
230	235	240
Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu		
245	250	255
Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Glu Arg Pro		
260	265	270
Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val		
275	280	285
Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly		
290	295	300
Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln		
305	310	315

Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr  
320 325 330  
Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro  
335 340 345  
Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro  
350 355 360  
Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val  
365 370

<210> 504  
<211> 3060  
<212> DNA  
<213> Homo Sapien

<400> 504  
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ctcctgtgcg gagtagtgga tttcgccaga agttttagta tcactactcc 150  
tgaagagatg attaaaaaaag ccaaagggga aactgcctat ctgccatgca 200  
aatttacgct tagtccgaa gaccagggac cgctggacat cgagtggctg 250  
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tggagacaaa atttatgtg actactatcc agatctgaaa ggccgagttac 350  
attttacgag taatgatctc aaatctggtg atgcatcaat aaatgttaacg 400  
aatttacaac tgtcagatat tggcacatat cagtgc当地 450  
tcctggtgtt gcaaataaga agattcatct ggtagttctt gttaaggcctt 500  
caggtgc当地 atgttacgat gatggatctg aagaaattgg aagtgacttt 550  
aagataaaaat gtgaacaaa agaaggttca cttccattac agtatgagtg 600  
gcaaaaattt tctgactcac agaaaatgcc cacttcatgg ttagcagaaa 650  
tgacttcatc tgttatatct gtaaaaaatg cctcttctga gtactctggg 700  
acatacagct gtacagtc当地 aaacagagtg ggctctgatc agtgc当地 750  
gc当地tcaaac gttgtccctc cttcaaataa agctggacta attgc当地ggag 800  
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tgctgtcgta aaaagc当地cag agaagaaaa tatgaaaagg aagttcatca 900  
cgatatcagg gaagatgtgc cacctccaaa gagccgtacg tccactgcca 950  
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aacatggaag gatattccaa gactcagtat aaccaggatc caagtgaaga 1050  
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acccttacaa gactgatgga attacagttg tataaatatg gactactgaa 1150  
gaatctgaag tattgtatta tttgacttta ttttaggcct ctagtaaaga 1200  
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aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300  
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gtgacactga tagttaaaag atgttttatt atatttcaa taactaccac 1400  
taacaaattt ttaactttc atatgcatac tctgatatgt ggtcttttag 1450  
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cgTTCTGTTT aatgttttg ctatTTAGTT aaatacattg aaggGAAATA 1550  
cccGTTCTTT TCCCTTTA TGcacacaAC agaaacacGC gttgtcatGC 1600  
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gttctcgtat ccaacAGAGT tgatgcacAA tatataaATA ctcaAGTCCA 1800  
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tatcaatATC taaagtGcat atatTTTA agaaAGATT ttctcaataa 1900  
cttctataaa aataagTTG atggTTTGGC ccAtctaAct tcactactat 1950  
tagtaagaac tttaacttt taatgtgtAG taaggTTTat tctacTTTT 2000  
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aaagttacCC acaacactGA gatCACATCT aagtGACACT CCTATTGTCA 2400  
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aggtgaccaa tgtttctga atgcataaaag aaatgaataa actcaaacac 2500  
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gatgaaataa tatgtacaac aaatccctgt gacacatgtt tacctatgga 2900  
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aaaraaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3000  
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<210> 505  
<211> 352  
<212> PRT  
<213> Homo Sapien

<400> 505  
Met Ala Leu Leu Leu Cys Phe Val Leu Leu Cys Gly Val Val Asp  
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Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu  
20 25 30  
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu  
35 40 45  
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser  
50 55 60  
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser  
65 70 75  
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg  
80 85 90  
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile  
95 100 105  
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys  
110 115 120  
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu  
125 130 135

Val Val Leu Val Lys Pro Ser Gly Ala Arg Cys Tyr Val Asp Gly  
 140 145 150  
 Ser Glu Glu Ile Gly Ser Asp Phe Lys Ile Lys Cys Glu Pro Lys  
 155 160 165  
 Glu Gly Ser Leu Pro Leu Gln Tyr Glu Trp Gln Lys Leu Ser Asp  
 170 175 180  
 Ser Gln Lys Met Pro Thr Ser Trp Leu Ala Glu Met Thr Ser Ser  
 185 190 195  
 Val Ile Ser Val Lys Asn Ala Ser Ser Glu Tyr Ser Gly Thr Tyr  
 200 205 210  
 Ser Cys Thr Val Arg Asn Arg Val Gly Ser Asp Gln Cys Leu Leu  
 215 220 225  
 Arg Leu Asn Val Val Pro Pro Ser Asn Lys Ala Gly Leu Ile Ala  
 230 235 240  
 Gly Ala Ile Ile Gly Thr Leu Leu Ala Leu Ala Leu Ile Gly Leu  
 245 250 255  
 Ile Ile Phe Cys Cys Arg Lys Lys Arg Arg Glu Glu Lys Tyr Glu  
 260 265 270  
 Lys Glu Val His His Asp Ile Arg Glu Asp Val Pro Pro Pro Lys  
 275 280 285  
 Ser Arg Thr Ser Thr Ala Arg Ser Tyr Ile Gly Ser Asn His Ser  
 290 295 300  
 Ser Leu Gly Ser Met Ser Pro Ser Asn Met Glu Gly Tyr Ser Lys  
 305 310 315  
 Thr Gln Tyr Asn Gln Val Pro Ser Glu Asp Phe Glu Arg Thr Pro  
 320 325 330  
 Gln Ser Pro Thr Leu Pro Pro Ala Lys Phe Lys Tyr Pro Tyr Lys  
 335 340 345  
 Thr Asp Gly Ile Thr Val Val  
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<210> 506

<211> 1705

<212> DNA

<213> Homo Sapien

<400> 506

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ggacaagaca tgactgtat gaggagctgc tttcgccat ttaacaccaa 200

gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250  
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ccctgctaat aaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700

aaaaaa 1705

<210> 507

<211> 206

<212> PRT

<213> Homo Sapien

<400> 507

Met Asn Phe Gln Gln Arg Leu Gln Ser Leu Trp Thr Leu Ala Arg  
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Pro Phe Cys Pro Pro Leu Leu Ala Thr Ala Ser Gln Met Gln Met  
20 25 30

Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln  
35 40 45

Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln  
50 55 60

Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala  
65 70 75

Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg  
80 85 90

Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser  
95 100 105

Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val  
110 115 120

Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys  
125 130 135

Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln  
140 145 150

Leu Gln Pro Ser Gln Glu Asn Glu Met Phe Ser Ile Arg Asp Ser  
155 160 165

Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu  
170 175 180

Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile  
185 190 195

Leu Leu Thr Trp Met Gln Lys Phe Tyr Lys Leu  
200 205

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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tccatgacaa ct当地atcag ctggaggtcc acgctgctgc cattaaatcc 500  
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ataaattcca tattttacct atga 924

<210> 509  
<211> 177  
<212> PRT  
<213> Homo Sapien

<400> 509  
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Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile  
20 25 30  
Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys  
35 40 45  
Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu  
50 55 60  
Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys  
65 70 75

Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe  
                   80                      85                     90  
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser  
                   95                     100                    105  
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln  
                   110                    115                    120  
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn  
                   125                    130                    135  
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His  
                   140                    145                    150  
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala  
                   155                    160                    165  
 Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala  
                   170                    175

<210> 510  
 <211> 996  
 <212> DNA  
 <213> Homo Sapien

<400> 510  
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 tccacaggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200  
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gaacgtgctg aagccccggg cccggatgac cccggcccg gcctcctgtt 850  
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cccgaaaggc tgccgccccct tcgccaagtt catctagggt cgctgg 996

<210> 511  
<211> 251  
<212> PRT  
<213> Homo Sapien

<400> 511  
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Leu Leu Gly Ser Ser Trp Gly Gly Leu Ile His Leu Tyr Thr Ala  
35 40 45  
Thr Ala Arg Asn Ser Tyr His Leu Gln Ile His Lys Asn Gly His  
50 55 60  
Val Asp Gly Ala Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile  
65 70 75  
Arg Ser Glu Asp Ala Gly Phe Val Val Ile Thr Gly Val Met Ser  
80 85 90  
Arg Arg Tyr Leu Cys Met Asp Phe Arg Gly Asn Ile Phe Gly Ser  
95 100 105  
His Tyr Phe Asp Pro Glu Asn Cys Arg Phe Gln His Gln Thr Leu  
110 115 120  
Glu Asn Gly Tyr Asp Val Tyr His Ser Pro Gln Tyr His Phe Leu  
125 130 135  
Val Ser Leu Gly Arg Ala Lys Arg Ala Phe Leu Pro Gly Met Asn  
140 145 150  
Pro Pro Pro Tyr Ser Gln Phe Leu Ser Arg Arg Asn Glu Ile Pro  
155 160 165  
Leu Ile His Phe Asn Thr Pro Ile Pro Arg Arg His Thr Arg Ser  
170 175 180  
Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro  
185 190 195  
Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu  
200 205 210  
Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly  
215 220 225

Val Val Arg Gly Gly Arg Val Asn Thr His Ala Gly Gly Thr Gly  
230 235 240

Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile  
245 250

<210> 512

<211> 2015

<212> DNA

<213> Homo Sapien

<400> 512

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gagcagacac tgcgtatgaca acggacgaca cagaagtgcc cgctatgact 200

ctagcaccgg gccacgccc tctggaaact caaacgctga ggcgtgagac 250

ctcttcttagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350

acatctccca acttcatggt gctgatgcc acctccgtgg agacatcagc 400

cggcagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450

caggcagtga tcccgggaa gccatcttg acacccttg caccgatgac 500

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ggtgtcctt gactcacctt ggcacatgtt ctgtgttca gttaagagag 1950  
acctgatcac ccattgtgt gcttccatcc tgcattaaaa ttcactcagt 2000  
gtggcccaaa aaaaa 2015

<210> 513

<211> 482

<212> PRT

<213> Homo Sapien

<400> 513

Met	Gly	Cys	Leu	Trp	Gly	Leu	Ala	Leu	Pro	Leu	Phe	Phe	Phe	Cys
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Trp	Glu	Val	Gly	Val	Ser	Gly	Ser	Ser	Ala	Gly	Pro	Ser	Thr	Arg
					20				25				30	

Arg	Ala	Asp	Thr	Ala	Met	Thr	Thr	Asp	Asp	Thr	Glu	Val	Pro	Ala
					35			40					45	

Met	Thr	Leu	Ala	Pro	Gly	His	Ala	Ala	Leu	Glu	Thr	Gln	Thr	Leu
					50				55				60	

Ser	Ala	Glu	Thr	Ser	Ser	Arg	Ala	Ser	Thr	Pro	Ala	Gly	Pro	Ile
					65				70				75	

Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg

80

85

90

Glu	Thr	Arg	Ser	Phe	Thr	Lys	Thr	Ser	Pro	Asn	Phe	Met	Val	Leu
95														105
Ile	Ala	Thr	Ser	Val	Glu	Thr	Ser	Ala	Ala	Ser	Gly	Ser	Pro	Glu
110														120
Gly	Ala	Gly	Met	Thr	Thr	Val	Gln	Thr	Ile	Thr	Gly	Ser	Asp	Pro
125														135
Glu	Glu	Ala	Ile	Phe	Asp	Thr	Leu	Cys	Thr	Asp	Asp	Ser	Ser	Glu
140														150
Glu	Ala	Lys	Thr	Leu	Thr	Met	Asp	Ile	Leu	Thr	Leu	Ala	His	Thr
155														165
Ser	Thr	Glu	Ala	Lys	Gly	Leu	Ser	Ser	Glu	Ser	Ser	Ala	Ser	Ser
170														180
Asp	Gly	Pro	His	Pro	Val	Ile	Thr	Pro	Ser	Arg	Ala	Ser	Glu	Ser
185														195
Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile	Thr	Pro	Ser	Arg
200														210
Ala	Ser	Glu	Ser	Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile
215														225
Thr	Pro	Ser	Trp	Ser	Pro	Gly	Ser	Asp	Val	Thr	Leu	Leu	Ala	Glu
230														240
Ala	Leu	Val	Thr	Val	Thr	Asn	Ile	Glu	Val	Ile	Asn	Cys	Ser	Ile
245														255
Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp
260														270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser
275														285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile
290														300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr
305														315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro
320														330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr
335														345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu
350														360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val
365														375

Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly Ser Ala Val Gly  
380 385 390  
Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser Tyr Ser Pro  
395 400 405  
Ser Glu Ala Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr Pro Thr  
410 415 420  
Met Asp Ile Ala Thr Lys Gly Pro Phe Pro Thr Ser Arg Asp Pro  
425 430 435  
Leu Pro Ser Val Pro Pro Thr Thr Asn Ser Ser Arg Gly Thr  
440 445 450  
Asn Ser Thr Leu Ala Lys Ile Thr Thr Ser Ala Lys Thr Thr Met  
455 460 465  
Lys Pro Gln Gln Pro Arg Pro Arg Leu Pro Gly Arg Gly Arg Pro  
470 475 480

Gln Thr

<210> 514  
<211> 2284  
<212> DNA  
<213> Homo Sapien

<400> 514  
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tccttccccgc gggcgcgaca gagctgtcct cgcacacctgga tggcagcagg 100  
ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150  
cttcttaaag caaactaaga ccagagggag gattatcctt gacccctt 200  
gaccaaaaact aaactgaaat taaaatgtt ctgcggggaa gaaggagct 250  
tgacttacac ttggtaata atttgcttcc tgacactaag gctgtctgct 300  
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gtcatctttt tctaaggaa tcagaggcaa tgagccgttataacttcaa 400  
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aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600  
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tggtgtcctg ttccctggta taggcctcgt cctcctgggt agaatcctt 1450  
cggaatcact ccgcaggaaa cgttactcaa gactggatta tttgatcaat 1500  
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gttttatgtt tggTTTGTa gaaggaatga agtgggaacc aaatttaggtA 2000  
attttgggtA atctgtctct aaaatattAG ctaaaaacAA agctctatgt 2050  
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tatgcaaaga aacaggttag gacatctagg ttccaattca ttcacattct 2150

tggttccaga taaaatcaac tgtttatatac aatttctaat ggatttgctt 2200  
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aattaaatat ttgaataaaat cttttgttac tcaa 2284

<210> 515  
<211> 431  
<212> PRT  
<213> Homo Sapien

<400> 515  
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Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu  
35 40 45  
Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln  
50 55 60  
Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly  
65 70 75  
Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala  
80 85 90  
Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala  
95 100 105  
Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile  
110 115 120  
Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu  
125 130 135  
Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val  
140 145 150  
Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp  
155 160 165  
Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp  
170 175 180  
His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu  
185 190 195  
Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser  
200 205 210  
Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala  
215 220 225  
Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala

230	235	240
Thr Pro Lys Pro Ala Thr Leu Leu Pro	Thr Asn Ala Ser Val	Thr
245	250	255
Pro Ser Gly Thr Ser Gln Pro Gln Leu	Ala Thr Thr Ala Pro Pro	
260	265	270
Val Thr Thr Val Thr Ser Gln Pro Pro	Thr Thr Leu Ile Ser Thr	
275	280	285
Val Phe Thr Arg Ala Ala Ala Thr Leu	Gln Ala Met Ala Thr	Thr
290	295	300
Ala Val Leu Thr Thr Phe Gln Ala	Pro Thr Asp Ser Lys Gly	
305	310	315
Ser Leu Glu Thr Ile Pro Phe Thr Glu	Ile Ser Asn Leu Thr Leu	
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr	Ala Leu Ser Met Ser Asn	
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr	Ala Ser Trp Glu Gly Arg	
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln	Gly Ser Val Pro Glu Asn	
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp	Leu Leu Ile Gly Ser Leu	
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile	Gly Leu Val Leu Leu Gly	
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg	Lys Arg Tyr Ser Arg Leu	
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile		
425	430	

<210> 516  
<211> 2749  
<212> DNA  
<213> Homo Sapien

<220>  
<221> unsure  
<222> 1869, 1887  
<223> unknown base

<400> 516  
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gcgggttcga aggggacact gtgtccctgc agtgcaccta caggaaagag 150

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tcgctgcctt ggcaccatct atgcagaaga agaaggccag gagacaatga 250  
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cgaaaaacgg ggccccgatg agtcttact gatctctctg ttcgtcttcc 400  
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ccagacccca ctttgtcttc cttccctggc gtcctcagac tttagtcccac 1450  
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ggattctggc ttctcttga accacctgca tccagccctt caggaaggct 1550  
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ggcttggcaggactctga attctaacaa tgcccagtga ctgtcgact 1650  
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35 40 45

His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg  
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Cys Ser Gly Thr Ile Tyr Ala Glu Glu Gly Gln Glu Thr Met  
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Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu  
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Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr  
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Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile  
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Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser  
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Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala  
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Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu  
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Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu  
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Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr  
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Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro  
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Ala Gly Ser Ser Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala  
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Glu Asp Thr Ser Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg  
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Val Ser Ile Pro Met Val Arg Ile Leu Ala Pro Val Leu Val Leu  
245 250 255

Leu Ser Leu Leu Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His  
260 265 270

Leu Leu Leu Trp Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln  
275 280 285

Arg Asn Glu Lys Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys  
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